FILE COPY

Office Supreme Court, U. S.
FILED
JAN 3 1927
WM. R. STANSBURY
CLERK

IN THE

Supreme Court of the United States

October Term, 1926.

Number 2, Original.

THE STATE OF NEW MEXICO,
Complainant,

versus

THE STATE OF TEXAS,
Respondent.

REPLY OF THE STATE OF NEW MEXICO TO THE EXCEPTIONS OF THE STATE OF TEXAS MADE TO THE REPORT OF THE SPECIAL MASTER.

FRANK W. CLANCY,
Special Counsel for the State of New Mexico.

THORNTON HARDIE,
of Counsel.

IN THE

Supreme Court of the United States

October Term, 1926.

Number 2, Original.

THE STATE OF NEW MEXICO,
Complainant,

versus

THE STATE OF TEXAS,
Respondent.

REPLY OF THE STATE OF NEW MEXICO TO THE EXCEPTIONS OF THE STATE OF TEXAS MADE TO THE REPORT OF THE SPECIAL MASTER.

To the Honorables, the Chief Justice and the Associate Justices of the Supreme Court of the United States:

This Court is apt to believe that statements of fact contained in a brief filed in a case of this high character before this Court would be strictly in accordance with the truth. We would prefer to believe that the many inaccurate statements contained in the "Exceptions of the State of Texas" are due to a lack of familiarity with the record, as so many different attorneys have represented both parties in the course of this litigation. Suffice it to say that there are many inaccuracies and many statements calculated to give very different impressions from the true facts.

The State of Texas says:

> "Texas has patented land and its patentees have entered upon said lands and made valuable improvements thereon with faith in the fact that the river *as it existed in 1850* constituted the boundary line. The United States has recognized this line." (See page 27, Exceptions of Texas.)

The United States, while New Mexico was a Territory, and as late as 1905, recognized the doctrines of accretion and avulsion as affecting this boundary. This is shown by "New Mexico Lands Surveyed," consisting of a reproduced plat of a New Mexico survey of sectionized lands, which survey was made in 1905, and which survey is reproduced at the bottom and on the south end of "Map No. 3, Texas," "Defendant's Exhibit No. 65." This was a map prepared by R. J. Owen at the original taking of testimony, and it shows that the New Mexico Land Office in sectionizing this land surveyed up to the river as it was actually running in 1905, recognizing such river at that place as the boundary between the Territory of New Mexico and the State of Texas. No attention was then paid by the United States to the location of any river of 1850.

The attitude of Texas in the past is shown by the boundaries of the Texas river surveys extending from the 32d Parallel to the southern extremity of the territory in dispite. We call particular attention to "Defendant's Exhibit No. 62," which is a map prepared by J. L. Campbell. This map shows that the Texas river surveys, beginning on the 32d parallel, and extending to the southern extremity of the territory in dispute, which surveys were made from 1849 to 1871, followed, not a river of 1850, but purported to follow the river as it was running at the time that the surveys were made.

The same situation is shown by an examination of Defendant's Exhibit No. 65, being Map No. 3, prepared by R. J. Owen in 1914. It is clear that Texas, both in the surveying of lands in the valley and in the issuing of patents, recognized the ordinary doctrines of accretion and avulsion.

As late as 1924, when Texas filed its main brief in this suit, the State of Texas, through its attorney general recognized as applicable to this boundary the ordinary doctrines of accretion and avulsion. (We refer to the next to the last paragraph on page 11 of Part One of the Brief of the State of Texas, and also to the last clause of the last paragraph on page 12 of Part One of said Brief.)

Yet counsel for the State of Texas have the temerity to say:

> "The series of acts on the part of the United States, New Mexico, and Texas, and the position taken by New Mexico in the pleadings and proof in this case, constitute a continuous, uninterrupted, practical construction of the terms of the contract over a period of seventy-four years, which now prohibits an application of the doctrine of avulsion and accretion in determining the boundary line in this area." See pages 27 and 28, Exceptions of Texas.

On page 26 of its present exceptions Texas says that the Master's decisions would amount to a nullification of the acts of the Legislature of Texas. The Legislature of Texas has done nothing concerning this particular portion of its boundary since 1850, except what has been done by it in this suit, and in 1850 it merely agreed that the Rio Grande River should be its boundary. Until the last two years it has always recognized the appli-

cation of the ordinary doctrines of accretion and avulsion as applicable to this boundary.

We cannot resist again calling the attention of this Court to what we had to say on page 9 of our "Reply in Opposition to the Motion of the State of Texas for the Postponement of the Submission of the Case and for Permission to Introduce Additional Testimony," (being the 22 page instrument with the scarlet cover, recently filed).

As bearing upon the applicability of the doctrines of accretion and avulsion, we refer to what we have already said, as follows:

1. Original 65-page Brief of L. M. Crawford, *Amicus Curiae* (brown cover pages), pages 6 to 8.

2. Reply Brief of State of New Mexico, filed December, 1924, 7 pages, (gray cover pages), pages 5 to 7.

3. Brief of L. M. Crawford, *Amicus Curiae,* 28 pages, filed before the Special Master (white cover pages), pages 2 to 5.

4. Recently filed Reply of New Mexico to the Motion of Texas to Postpone and to take additional testimony, 22 pages, (red cover pages).

In concluding this question we briefly suggest that up until the Territory of New Mexico was admitted as a State, in 1911, there could be no question that the ordinary principles of accretion and avulsion applied to this river boundary. It is also clear that the Territory of New Mexico and the Congress of the United States, even if they had sought or desired to do so, could not have changed the boundaries of the State of Texas without its consent. Louisiana v. Mississippi, 50 Law Ed., 926; Washington v. Oregon, 53 Law Ed., 118.

It is therefore apparent that, at least insofar as Texas is concerned, its boundaries would continue to be governed by the doctrines of accretion and avulsion.

It is also clear that the purpose of Congress was to incorporate all of the Territory of New Mexico into the State of New Mexico. Certainly there was no intention to leave a small strip or portion of the former Territory, out of the State of New Mexico, as well as out of the State of Texas. The language of the Constitution of New Mexico and the language of Congress in creating a State out of this Territory will be given a reasonable construction so as to accomplish the evident intention of Congress and of the inhabitants of New Mexico. It will be given a construction so as to furnish a reasonable boundary, and not an absurdity. The Special Master in his decision correctly interpreted the Constitution of the State of New Mexico, as if there were read into it, the provisions of law, that the position of the boundary would change in accordance with and in obedience to the well recognized principles of accretion and avulsion.

The State of New Mexico is charged with being inconsistent in its claims. It is not. It claimed that the river in 1850 occupied a position on the East side of the valley substantially as shown in its pleading map, and that it continued in such position until about 1860, when it made an avulsive change to the West side of the valley. This claim was not a denial of the application of the doctrines of accretion and avulsion. But the State of Texas says that the *Amicus Curiae* contends that the Texas position for the 1850 river is correct. This is untrue and unfair. The *Amicus Curiae* expressly stated that he made no such contention. (See pages 8 and 9, Original 65-page Brief of *Amicus Curiae*).

Reference has been made to the pleadings of the parties. It not infrequently happens in a boundary suit that the true boundary is at variance with the claims of both parties. But the true nature of this suit is one to establish the correct boundary, and the pleadings are broad enough to accomplish such a result.

Beginning at page 28 of "Exceptions of the State of Texas to the Report of the Special Master," there are numerous statements which are not fair statements of the record. Some of these statements we cannot pass without referring to them. Some of the statements to which we take exception are:

Page 29: "Witness Owen in his testimony on the question of accretion made but one statement in regard thereto, which is as follows ** * After the witness had been examined about many other matters the tesmony closed *but positively the statements here made are the only statements in the entire record, including the additional testimony, relating to accretion.*"

Page 30: "The normal rule and habit of the river in the locality in question is to make avulsive changes."

Page 33: "The supplementary or conditional finding of the Master from the erroneous assumption that accretion modified the boundary as it existed on September 9, 1850, and that therefore the El Paso Country Club is land within the State of New Mexico in the Santa Teresa Grant, is *admittedly* not based upon either testimony or facts proven in the case."

Page 33: "Is based upon a mere presumption in law, there being no supporting facts."

Page 34: "In this maze of testimony at least five independent beds of the river from 1889 to 1914, *all admittedly avulsive.*"

Page 34: "Which is shown by the location of a bed on the French map, unidentified, unproven, incapable of anything like exact location upon the earth's surface from any land marks, field notes, surveys, or monuments apparent upon it."

Page 35: "It is not shown that the bed described as running north, east and south of the Country Club of 1903 was a part of a stream carrying waters of the river."

Page 35: "The uncontradicted testimony is that this very land is substantial, solid, tufted soil, on which existed prior to 1900 trees of an average of 18 inches in diameter. There are many larger ones."

Page 36: "The uncontradicted testimony of witness Kezer and witness C. F. Jones puts the foregoing facts beyond question."

Page 37: "For it has been positively shown in the testimony that this is a river of avulsions and that from beginning to end if this is accretion it is the only instance of accretion since 1850."

Page 37: "There is not a word of testimony in the record that the river had acquired any other habit than the habit of avulsion."

We shall not here attempt to show the inaccuracy of all of the statements quoted above. We shall deal with a few which are more or less typical.

"In this maze of testimony at least five independent beds of the river from 1889 to 1914, *all admittedly avulsive.* Texas Exceptions, page 34.

If the river was located as claimed by Texas in 1850 then its position at that time is found on defendant's Exhibit No. 65—R. J. Owen.

Our next information concerning the position of the river is derived from the Texas surveys made in 1871. When these surveys are correctly understood and applied they place the river in this locality substantially in the same position occupied by it in 1850, as claimed by Texas, with a slight variation towards the East in the Country Club district. For a discussion of these surveys see pages 10 to 24, Original Brief of *Amicus Curiae,* 65 pages.

The next location for the river in this vicinity is given on Master's Exhibit No. 2, Map by International Boundary Commission, 1889. This map shows the bulge in the river in this locality has progressed still further towards the East.

The next location for the river is that shown on the French map made for the Reclamation Service in 1903. This map shows that the bulge has progressed still further towards the East. Of course what happened to the river after the avulsive changes beginning in 1905 is of no bearing upon the location of the boundary. Instead of several independent avulsive beds, as claimed by Texas, the maps indicate progressive advances of the river toward the East, by the ordinary process of accretion, there being an erosion upon the Eastern Bank of the river and deposit on the Western bank of the river. We call attention to the topography discussion, pages 53 to 65, original Brief of *Amicus Curiae.*

> "The French map referred to in the Master's report, which is shown by the location of a bed on the

> French map, unidentified, unproven, incapable of anything like exact location upon the earth's surface from any land marks, field notes, surveys, or monuments appearing upon it." Page 34, Texas Exceptions.

Of course the greatly reduced photographic copy of the map, found in the supplementary record following page 124, and known as Plaintiff's Exhibit No. 285, does not show many land marks, field notes, etc., but an examination of the original and an examination of copies of the original on the same scale as the original make it abundantly clear that the Reclamation Service was not guilty of the foolish thing charged by the attorneys of Texas. The Master had before him copies of the original, drawn on the same scale as the original, being Master's Exhibit No. 3, and we shall present for the examination of the Court photographic copies of the original as applicable to this particular section, and the Court will easily see how exactly the river bed can be located on the Earth's surface from this map.

> "It is not shown that the bed described as running north, east and south of the Country Club of 1903 was a part of a stream carrying waters of the river." Page 35, Texas Exceptions.

It is only necessary to call attention to extracts from the testimony of the witness R. J. Owen, pages 3 and 4, "Reply Brief of the State of New Mexico," which was filed by Frank W. Clancy as attorney for New Mexico in December, 1924. This is further shown by reference to pages 5 to 13, Brief of *Amicus Curiae*, filed before the Special Master.

> "The uncontradicted testimony is that this very land is substantial, solid, tufted soil, on which existed prior to 1900 trees of an average of 18 inches

in diameter. There are many larger ones." Page 35, Texas Exceptions.

"The uncontradicted testimony of the witness Kezer and witness C. F. Jones puts the foregoing facts beyond question." Page 36, Texas Exceptions.

It is only necessary to call the Court's attention to the fact that all of these Texas witnesses spoken of, testified that the land that they were talking about, and upon which the large trees were located, lay entirely on the Texas side of the Rio Grande in 1903.

They all testified that in going from the East side of the valley onto the land that they were testifying about, it was not necessary to cross the channel of the Rio Grande.

It is, therefore, very evident that if the river was located as shown on the French map in 1903, then the witnesses could not have been talking about the land now under consideration, as they would have been compelled to have crossed the river in order to have gotten on this land.

Therefore, when it is once established that the Rio Grande was flowing substantially as shown on the French map, in 1903, we must disregard entirely the testimony of these witnesses as to the growth of trees on the land in question, because while they testified that the trees were on the land in question, they were really testifying about land situated to the East and North of the location of the river in 1903. They were not testifying about conditions existing on this particular land. See pages 50 to 53 Original Brief of *Amicus Curiae;* also pages 5 and 6, "Reply of the State of New Mexico," filed by

Frank W. Clancy, December, 1924, (7 pages, in gray covers); also, pages 13 to 19, Brief of *Amicus Curaie* before Special Master.

The next claim made by Texas is that the river is such an avulsive river that the ordinary rules do not apply. We merely refer to Original Brief of *Amicus Curiae*, pages 53 to 62; also Brief of *Amicus Curiae* before Special Master, pages 19 to 24.

We shall not prolong this Reply further, but will attach hereto as an exhibit a list of the documents filed and referred to above, and which will be of assistance to the Court.

Respectfully submitted,

FRANK W. CLANCY,

Special Counsel for the State of New Mexico.

THORNTON HARDIE,

of Counsel.

ADDENDA.

Documents referred to in this Reply:

1. Original Brief of L. M. Crawford, *Amicus Curiae*, in brown covers, 65 pages in length.
2. Reply Brief of the State of New Mexico, gray covers, 7 pages, filed by Frank W. Clancy, December, 1924.
3. Brief of L. M. Crawford, *Amicus Curiae*, white covers, filed before the Special Master by Thornton Hardie and Oscar W. Underwood, Jr.
4. Additional Exceptions of the State of New Mexico to the Report of the Special Master, 12 pages, filed at the October, A. D. 1926, term of the Court.
6. Reply in Opposition to the Motion of the State of Texas for Permission to Introduce Additional Testimony, 22 pages, red covers.

FILE COPY

Supreme Court of the United States

OCTOBER TERM, 1930

No. 2, Original

THE STATE OF NEW MEXICO, COMPLAINANT,

v.

THE STATE OF TEXAS, DEFENDANT.

REPORT OF THE SPECIAL COMMISSIONER.

SAMUEL S. GANNETT,
Commissioner.

WASHINGTON, D. C., JULY 17, 1930.

[illegible] GOVERNMENT PRINTING OFFICE, WASHINGTON, D. C.

Supreme Court of the United States

OCTOBER TERM, 1930

No. 2, Original

THE STATE OF NEW MEXICO, COMPLAINANT,

vs.

THE STATE OF TEXAS, DEFENDANT.

IN EQUITY.

CONTENTS

	Page
Title of accompanying map	3
Section 3 of decree of the Supreme Court dated April 9, 1928	3
Section V (1) of the Special Master's report	4–5
Method of procedure	5–8
Gain and loss of land by New Mexico and Texas by reestablishment of boundary line in 1929 and 1930 under the terms of the decree of the Supreme Court	8–9
Descriptions and geographic positions of triangulation stations	10–19
Dimensions and weight of monuments	20
Description and geographic position of Clark Monument No. 1	20–21
Descriptions and geographic positions of boundary line and reference monuments	20–68
Description and geographic position of Kidder Astronomic Monument of 1903	54
Description and geographic position of Gannett Monument No. 1	21
Total length of boundary line surveyed and monumented in 1929 and 1930	20, 79
Number of boundary line and reference monuments	20
Reestablishment of Salazar-Diaz River Traverse of 1852; courses and distances	69–74
Trial line from Clark Monument No. 1 southwest down east bank of Rio Grande of 1850-1860 to RXIII; courses and distances	74
Diagram of same, facing	74
Magnetic declination	75
Description of boundary line by courses and distances	75–79
Diagram showing relation of New Mexico-Texas Boundary Line, between Monuments 98 and 101 to Santa Fe Railway and to U. S. Highway No. 80 near Spears Oil Mill	9

Page
Diagram of triangulation of the Salazar-Diaz Survey of 1852..... 10–11
Bronze tablet imbedded in top of each Boundary Line Monument... 20
Bronze tablet imbedded in top of each Reference Point Monument.. 54
Diagram showing New Mexico-Texas Boundary Line in drainage canal from Boundary Monument 71 to Boundary Monument 72 and near Reference Monuments 32 and 33..... 38–39
Diagram showing New Mexico-Texas Boundary Line in Rio Grande of 1930 near Boundary Monuments 81 and 82 and near Reference Monuments 29 and 30..... 42–43
Diagram showing connection made in 1929 and 1930 by the New Mexico-Texas Boundary Commission between Clark Monument No. 1 as reestablished by the Scott-Cockrell Commission of 1911 and triangulation station RXIII of the Salazar-Diaz Survey of 1852... 74–75
Map of the Boundary Line between New Mexico and Texas in the Valley of the Rio Grande from the Parallel of 32 degrees north latitude, southwardly to the parallel of 31 degrees and 47 minutes as surveyed in 1929 and 1930..... 78–79

Supreme Court of the United States

OCTOBER TERM, 1930

No. 2, Original

THE STATE OF NEW MEXICO, COMPLAINANT,

vs.

THE STATE OF TEXAS, DEFENDANT.

REPORT OF COMMISSIONER APPOINTED TO RUN, LOCATE, AND MARK THE BOUNDARY BETWEEN NEW MEXICO AND TEXAS.

To the Honorable Chief Justice and the Associate Justices of the Supreme Court of the United States: I, Samuel S. Gannett, Washington, D. C., Commissioner appointed under decree of the Court rendered April 9, 1928, to run, locate, and mark the boundary between the State of New Mexico and the State of Texas in the valley of the Rio Grande River, extending southwardly from the parallel of 32 degrees north latitude to the parallel of 31 degrees 47 minutes on the international boundary between the United States of America and the United States of Mexico,—have the honor to submit the following report with an accompanying map. The map is marked as follows:

Supreme Court of the United States

OCTOBER TERM, 1930

No. 2, Original

THE STATE OF NEW MEXICO, COMPLAINANT,

vs.

THE STATE OF TEXAS, DEFENDANT.

MAP OF THE BOUNDARY LINE BETWEEN NEW MEXICO AND TEXAS IN THE VALLEY OF THE RIO GRANDE RIVER FROM THE PARALLEL OF 32 DEGREES NORTH LATITUDE SOUTHWARDLY TO THE PARALLEL OF 31 DEGREES AND 47 MINUTES, AS SURVEYED IN 1929 AND 1930, IN ACCORDANCE WITH THE TERMS OF THE ABOVE-ENTITLED CAUSE.

Section 3 of the decree specifies as follows:

"The true boundary between the State of New Mexico and the State of Texas in the valley of the Rio Grande River, extending southwardly from the parallel of 32 degrees north latitude to the parallel of 31 degrees 47 minutes on the international boundary between the United States of America and the United States of Mexico, is the middle of the channel of the Rio Grande River as it existed on the 9th day of September, 1850, as outlined by the special master in Section V (1) of his report; the intersection of the east bank of the river with the line of the 32nd parallel to be taken at a point 600 feet west from the Clark Monument No. 1 as re-established by the Scott-Cockrell Commission, and the middle line of the channel to be taken 150 feet from the east and west banks of the river, respectively, as found by the special master."

Sec. V (1) of the special master's report referred to in section 3 of the decree follows:

"CONCLUSIONS AS TO THE LOCATION, COURSE, AND WIDTH OF THE RIO GRANDE IN 1850

(1) *Course and Location*

"On all the evidence in the case, I find that the allegations in the plaintiff's bill of complaint, as to the location and course of the Rio Grande, "as it existed in the year 1850," are not sustained, and that the river did not flow on the eastern side of the valley as set forth in the plaintiff's Pleading Map.

I find the location and course of the Rio Grande "as it existed in the year 1850" to have been, in general, as alleged in the defendant's cross bill, and, in particular, as follows, on the dates nearest to 1850 of which there is credible evidence.

The earliest date at which there is definite evidence of the location and course of the river at the thirty second parallel is January, 1859, when John H. Clark made his survey of the parallel, at which time he located his Monument No. 1, 600 feet east of the east bank of the river. In August, 1860, Anson Mills made his Texas Surveys No. 161 and 162, at which time the east bank of the river was only 428 feet (154 varas) west of Monument No. 1, the river having shifted to the eastward 172 feet, between January, 1859 and August, 1860.[1]

I find that the location of the east bank and of the course of the river of 1850, from the thirty second parallel to a point a few hundred feet northeast of the northernmost point on the Salazar-Diaz Survey of 1852, was its location and course shown on the plats and field notes of Texas Surveys No. 161 and 162.

---

[1] See Surveys No. 161 and No. 162 and Resurvey of No. 162, Defendant's Exhibits No. 16, 16a, 17, 17a, Record 3223-3228.

Between the extreme southwestern corner of Survey No. 162 and the northernmost point of the Salazar-Diaz Survey, there is a gap of a few hundred feet. The location of the east bank and the course of the river for this gap, I find was that shown on the plat and field notes of Texas Survey No. 35, a survey made on October 4, 1849.[2]

The location of the west bank and of the course of the river, in 1852, from the northernmost point of the Salazar-Diaz Survey to the point called Frontera and thence to the Canyon, I find was that shown by the triangulation, traverse, and field notes contained in the Salazar-Diaz Survey (substantially as reproduced on Defendant's Exhibit No. 70, Record 3373, subject to any necessary corrections on that reproduction as to the proper magnetic variations).

The location and course of the river through the Canyon, in 1850, I find was the same as its location in 1913 (the date when the bill of complaint was filed).

The location of the west bank and of the course of the river, in 1852, from the southern end of the Canyon to the International Boundary Line, viz., to the parallel of 31 degrees 47 minutes north latitude, I find was that shown by the Salazar-Diaz Survey."

Method of Procedure

Field work of running, locating, and marking the boundary line was begun in August, 1929 and completed in February, 1930.

(1) A transit traverse line was carefully run around that portion of the Rio Grande Valley in which the disputed boundary line is situated, as a base for a topographic map of the area of 60 square miles, and to furnish a check upon other transit traverse lines which were later run to determine the exact positions of all boundary and reference monuments.

---

[2] Defendant's Exhibit No. 15, Record 3222, red numbered pages 5487-5490.

(2) The Salazar-Diaz triangulation and traverse of 1852 were reproduced on the ground as closely as possible, from the angles, bearings, and distances given in the record. The triangulation stations having originally been more carefully located, their positions were accepted as being correct and the traverse lines were adjusted to fit.

(3) Using the adjusted Salazar-Diaz traverse along the west bank of the Rio Grande of 1852 as a reference line, sites for monuments were selected at the proper distance at angle points to the eastward so that the resulting final boundary line along the middle of the river would be parallel to and 150 feet to the eastward of the line originally run in 1852 on the west bank of the river. Fortunately these sites are, in nearly all instances, on dry soil, furnishing a stable foundation for the monuments.

(4) After the erection of substantial concrete boundary line monuments at angle points, determined by the method indicated in the preceding paragraph, the true course and distance between adjacent monuments as well as the elevation of top of each monument, was very carefully determined.

Of the natural objects mentioned in the record as having been used by the Salazar-Diaz Survey of 1852, Muleros, a well known mountain with a definite sharp summit, rising nearly 1,000 feet above the surface of water in the river, was most easily and surely identified from Special Masters Exhibit No. 1. (The Emory Map of 1855.)

With Muleros as the initial point, the position of Frontera astronomical station, as accepted and marked upon the ground by engineers for the plaintiff and for the defendant was verified by the true course and distance from Muleros, namely N. 21° 34′ 30″ W., 2,974.93 meters or 9,760.25 feet. (Defendant's Exhibit No. 70.)

Using the line Frontera-Muleros as a base, the other triangulation stations RX, I, RXI, J, L, RXII, N, O, P, Q, and RXIII, were located on the ground from the angles and distances of Salazar and Diaz given on pages 2386-2388 of the Record.

Triangulation stations P and Q were considered as having been closely identified on the ground. Each of these stations being located on a definite ridge or mesa point on the western edge of the Rio Grande Valley and more than 300 feet above the river. These two mesa points although considerably eroded by wind and rain since first established in 1852 have apparently not changed much in appearance since that date. The points adopted and marked for triangulation stations P and Q, in 1929, may therefore be considered as located within a very few feet of the original Salazar-Diaz stations and serve as a check on locations adopted for Muleros, Frontera, and all other triangulation and traverse stations of the Salazar-Diaz Survey of 1852.

Stations I, J, L, and N, which are likewise situated on the mesa bluff on the west side of the valley are in each case on comparatively level, sandy summits whose appearance has undoubtedly been greatly changed by wind storms since first located in 1852. These stations as well as stations O, RX, RXI, RXII, and RXIII were established in 1929 as nearly as possible from the angles and distances given in the record.

They are all located in the comparatively level valley with no natural features to help in their identifications.

The triangulation and transit traverse along or near the New Mexico-Texas boundary in the Rio Grande Valley was connected with the first-order triangulation net of the United States through stations Canutillo, North Franklin, International Boundary Monuments Nos. 1, 2, and 3, by the New Mexico-Texas Boundary Commission in 1929 and 1930 and consequently the geographic positions of all stations as well as positions of all boundary and reference monuments have been computed on the North American datum of 1927.

The instrumental work of 1929 and 1930 along the disputed New Mexico-Texas boundary line in the valley of the Rio Grande was done by E. L. McNair, geodetic engineer, chief of field party, for more than 30 years an employee of the United States Department of the Interior Geological

Survey. Mr. McNair was also chief of field party in the survey and monumenting of the 100th Meridian boundary between Oklahoma and Texas, as noted in report of the commissioner for the Supreme Court of the United States, October term 1929 No. 6, Original, The State of Oklahoma, Complainant, vs. the State of Texas, Defendant, the United States of America, Intervener.

Angles in the triangulation were measured with a theodolite having a circle 8 inches in diameter reading by two micrometers to 2 seconds of arc. The closure error of 29 triangles in the scheme is 3.2″.

Angles at stations along the traverse lines were measured at least four times with a transit having a circle 6½ inches in diameter, reading by 2 verniers to 30″ of arc. Observations to determine the true meridian were made on Polaris at intervals not exceeding 3 miles.

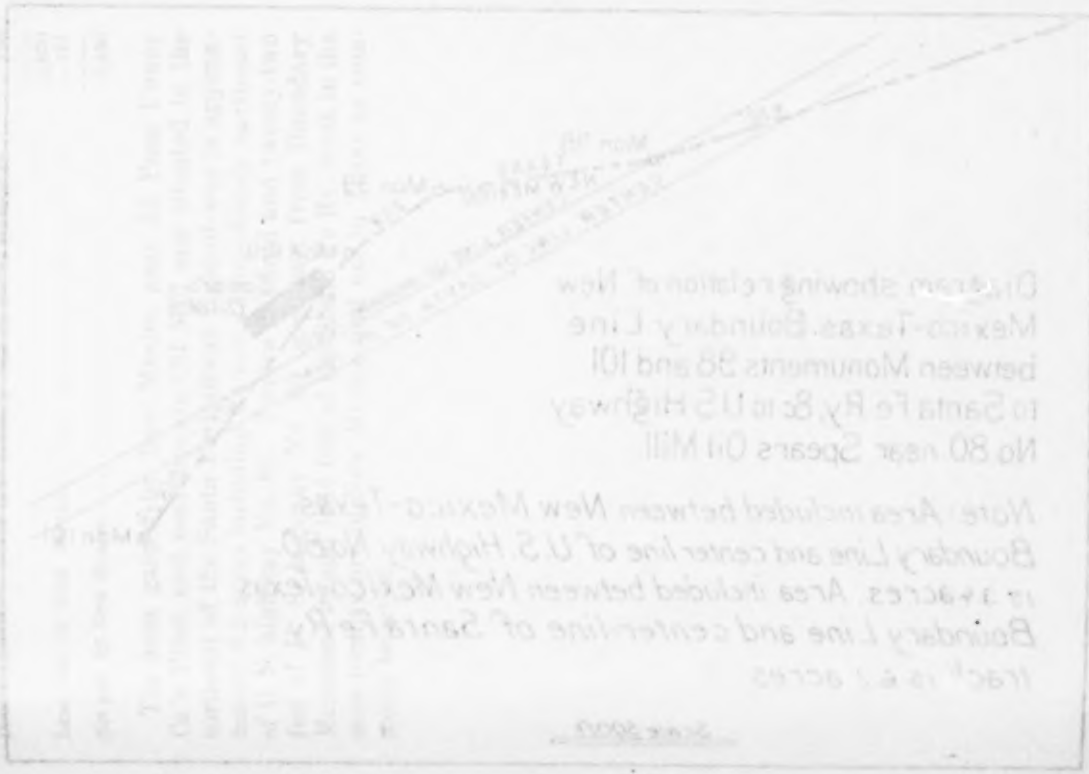
Distances were measured with a steel tape 300 feet in length under a tension of 20 lbs.; the temperature was observed at frequent intervals, and the necessary correction was applied to reduce to the standard temperature of 68°.

An invar tape 300 feet in length was available as a standard of comparison and the 300 foot steel tape was tested with it every few days.

Distances were also reduced to mean sea level so that the geodetic positions of all stations and monuments could be computed.

The boundary line between New Mexico and Texas in the Rio Grande Valley, established in 1929 and 1930 in compliance with terms of the decree of the Supreme Court of the United States dated April 9, 1928, and described in this report, will cause the net loss of approximately, 2496 acres or 3.9 square miles by Texas to New Mexico, as follows:

Texas:	Acres
Patented land actually lost	2,500
Doubtful patented area by Texas sold by Texas claimants as Texas land	370
	2,870
Land gained from New Mexico	374
Net Loss by Texas	2,496



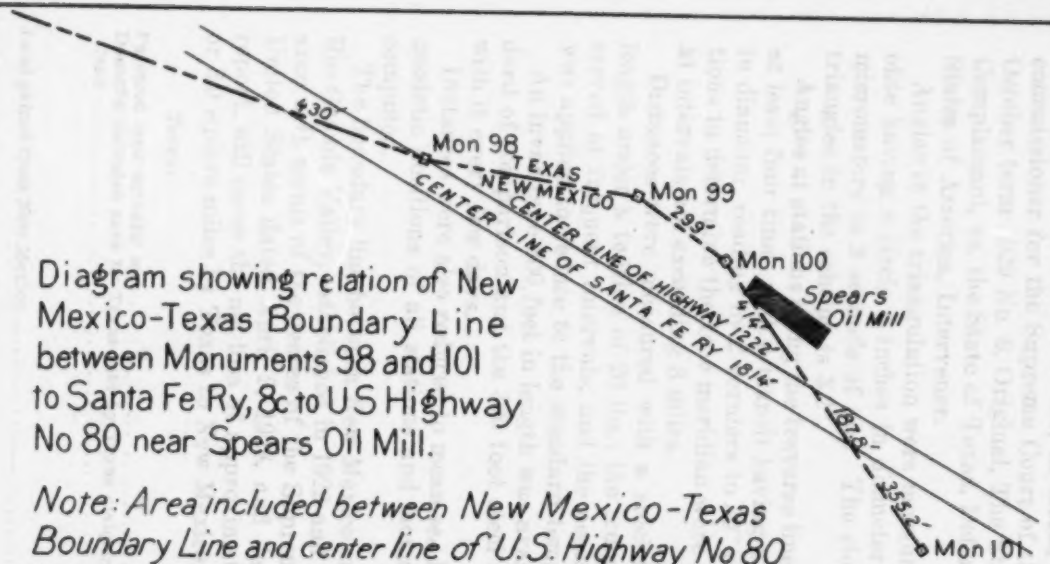


Diagram showing relation of New Mexico-Texas Boundary Line between Monuments 98 and 101 to Santa Fe Ry, & to U S Highway No 80 near Spears Oil Mill.

Note: Area included between New Mexico-Texas Boundary Line and center line of U.S. Highway No 80 is 3.4 acres. Area included between New Mexico-Texas Boundary Line and center-line of Santa Fe Ry track is 6.2 acres.

Scale 500ft.

New Mexico:	Acres
Patented Texas land gained by New Mexico	2,500
Doubtful patented Texas land actually sold by Texas claimants	370
	2,870
Land lost by New Mexico	—374
Net gain by New Mexico	2,496

The area gained by New Mexico near El Paso Power Co.'s Plant and near Spears Oil Mill and situated to the northeast of the Santa Fe Railway right-of-way is approximately 6.2 acres including 3.4 acres immediately northeast of U. S. highway No. 80. Twelve hundred and twenty-two feet of U. S. highway No. 80, southeast from Boundary Monument 98 and 1814 feet of the Santa Fe Ry. track in the same locality are in New Mexico and not in Texas as commonly believed.

THE FIELD NOTES OF THE BOUNDARY SURVEY AND OF TRIANGULATION AND TRANSIT TRAVERSE, TOGETHER WITH TABULATIONS OF TECHNICAL DATA FOLLOW:

Descriptions and Geographic Positions on 1927 North American Datum of Triangulation Stations of the United States Coast and Geodetic Survey, The United States Geological Survey, and of the Salazar-Diaz Survey of 1852 as reestablished by the New Mexico-Texas Boundary Line Commission in 1929 and 1930.

INTERNATIONAL BOUNDARY MONUMENT No. 1 OF UNITED STATES-MEXICO 1855

On the west bank of the Rio Grande, 635.8 feet due west from Reference Monument No. 17 which is on east bank of river. It is 483.39 feet due west from the terminal point of the New Mexico-Texas boundary, which point falls in the river (of 1930). No triangulation stations visible. Station mark: A cut stone monument 12 feet high, 5 feet square at base and 2½ feet square at top. It is encased in covering of concrete and painted white, An iron picket fence surrounds the monument for protection.

[Latitude 31° 47′ 01.608″. Longitude 106° 31′ 45.109″.]

INTERNATIONAL BOUNDARY MONUMENT No. 2 OF 1855

Station is on the boundary line between Mexico and the United States on the top of first high ridge west of the Rio Grande. It is also a triangulation station of the U. S. Coast and Geodetic Survey.

Station mark: An obelisk of concrete 4 feet square at base and 12 feet high.

[Latitude 31° 47′ 01.606″. Longitude 106° 32′ 12.164″.]

To station—	Azimuth.			Back azimuth.			Distance.	
	°	′	″	°	′	″	At sea level, Log. meters.	Feet, surface.
Inter. Bdy. Mon. No. 3.....	90	00	47.2	269	59	21.9	3.629704	13988.3
Muleros	114	14	34	294	14	17	2.955775	2963.7
North Franklin.	197	21	44	17	23	06	4.140800	45379.8

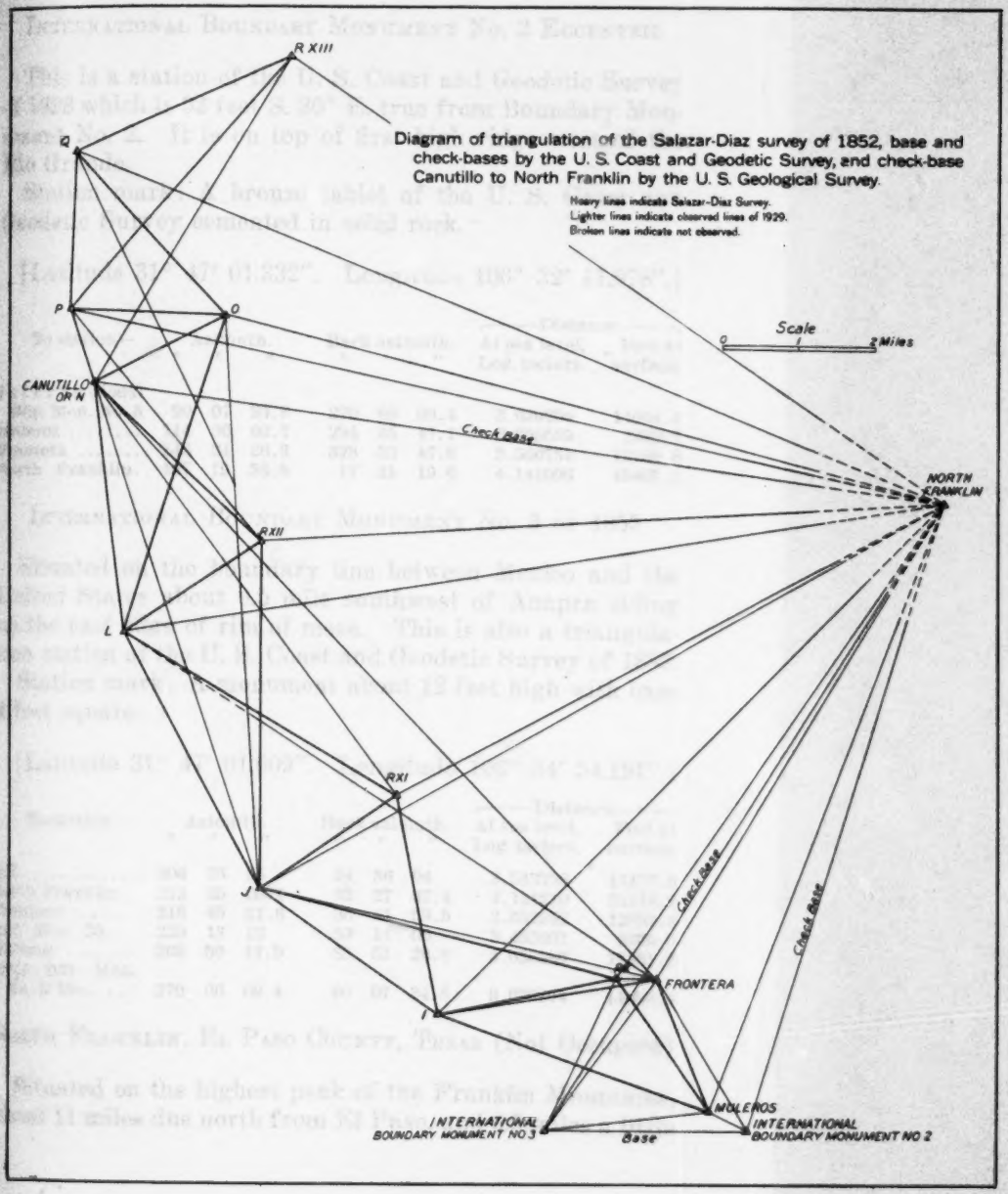


Diagram of triangulation of the Salazar-Diaz survey of 1852, base and check-bases by the U. S. Coast and Geodetic Survey, and check-base Canutillo to North Franklin by the U. S. Geological Survey.

Heavy lines indicate Salazar-Diaz Survey.
Lighter lines indicate observed lines of 1929.
Broken lines indicate not observed.

INTERNATIONAL BOUNDARY MONUMENT No. 2 ECCENTRIC

This is a station of the U. S. Coast and Geodetic Survey of 1893 which is 32 feet S. 30° E. true from Boundary Monument No. 2. It is on top of first high ridge west of the Rio Grande.

Station mark: A bronze tablet of the U. S. Coast and Geodetic Survey cemented in solid rock.

[Latitude 31° 47′ 01.332″. Longitude 106° 32′ 11.978″.]

To station—	Azimuth.			Back azimuth.			Distance.	
	°	′	″	°	′	″	At sea level, Log. meters.	Feet at surface.
International Bdy. Mon. No. 3	90	07	34.8	270	06	09.4	3.630204	14004.4
Muleros	114	36	03.7	294	35	47.1	2.959559	2989.7
Frontera	148	34	26.3	328	33	47.8	3.566751	12100.8
North Franklin.	197	19	56.8	17	21	19.6	4.141006	45401.2

INTERNATIONAL BOUNDARY MONUMENT No. 3 OF 1855

Situated on the boundary line between Mexico and the United States about 0.5 mile southwest of Anapra siding on the east edge of rim of mesa. This is also a triangulation station of the U. S. Coast and Geodetic Survey of 1893.

Station mark: A monument about 12 feet high with base 4 feet square.

[Latitude 31° 47′ 01.609″. Longitude 106° 34′ 54.191″.]

To station—	Azimuth.			Back azimuth.			Distance.	
	°	′	″	°	′	″	At sea level, Log. meters.	Feet at surface.
RX	294	35	35	24	36	04	3.543798	11477.8
North Franklin..	212	25	06.1	32	27	57.4	4.194210	51318.3
Frontera	216	45	71.2	36	45	56.5	3.592942	12853.0
Ref. Mon. 25....	239	13	52	59	14	00	3.455661	9369.6
Muleros	263	50	17.9	83	51	26.8	3.538980	11351.2
Inter. Bdy. Mon. No. 2 Ecc.....	270	06	09.4	90	07	34.8	3.630204	14004.4

NORTH FRANKLIN, EL PASO COUNTY, TEXAS (Not Occupied)

Situated on the highest peak of the Franklin Mountains, about 11 miles due north from El Paso, and 6.5 miles a little

south of east from Canutillo. It may be approached from either side with an approximate climb of 3,000 feet in each case.

This is a station of both the U. S. Coast and Geodetic Survey and of the U. S. Geological Survey.

Station mark: A bronze tablet of the U. S. Geological Survey set in solid rock.

[Latitude 31° 54′ 10.122″. Longitude 106° 29′ 35.111″.]

To station—	Azimuth.			Back azimuth.			Distance.	
	°	′	″	°	′	″	At sea level, Log. meters.	Feet at surface.
Inter. Bdy. Mon. No. 2 Eccentric.	17	21	19.6	197	19	56.8	4.141006	45401.2
Muleros	21	07	26.5	201	05	47.1	4.138313	45120.6
Frontera	31	01	14.9	210	59	13.6	4.069560	38514.3
Inter. Bdy. Mon. No. 3	32	27	57.4	212	25	09.1	4.194210	51318.3
RX	34	42	20	214	40	00	4.085763	39978.4
Station I	44	46	20	224	42	45	4.181633	49853.4
Station J	60	42	13	240	37	23	4.220642	54538.6
RXI	61	54	17	241	50	24	4.118040	43062.8
Station L	80	56	42	260	50	53	4.244019	57554.8
RXII	86	32	35	266	27	44	4.161032	47543.8
Canutillo	97	51	24.54	277	45	22.83	4.2587468	59540.0
Station P	102	16	35	282	10	22	4.277797	62209.8
Station O	104	19	35	284	14	30	4.193704	51258.5
Station Q	111	47	19	291	41	09	4.296243	64909.0
RXIII	124	06	12	304	01	34	4.221550	54652.8

Frontera, El Paso County, Texas

This is a reestablished triangulation station of the Salazar-Diaz Survey of 1852 and an astronomic station of Major W. H. Emory of the same year. It is 163 feet south and 98 feet east of Gibsons Crossing of Santa Fe Railway, 32 feet southwest of center of railway track and 1.8 feet lower than top of rail.

Station mark: A bronze tablet set in concrete block 20 inches square and 24 inches deep, with top 3 inches above surface of ground. It is stamped "Reference Point No. 8. Frontera".

[Latitude 31° 48′ 43.494″. Longitude 106° 33′ 25.081″.]

To station—	Azimuth. ° ′ ″	Back azimuth. ° ′ ″	Distance. At sea level, Log. meters.	Distance. Feet, surface.
International Bdy. Mon. No. 3	36 45 58.5	216 45 11.6	3.592942	12853.0
Station I.....	81 05 15	261 03 41	3.672778	15446.9
RX	92 44 10	272 43 50	2.948923	2917.3
Station J.....	102 48 31	282 45 42	3.937630	28424.4
Station L.....	122 53 12	302 49 32	4.128030	44064.8
Canutillo	136 24 07	316 20 07	4.238154	56782.7
N. Franklin....	210 59 13.6	31 01 14.9	4.069560	38514.3
Inter. Bdy. Mon. No. 2 Ecc....	328 33 48	148 34 26	3.566751	12100.8
Muleros	338 24 49	158 25 11	3.473629	9765.4
Reference Mon. No. 25.....	356 16 39	176 16 43	3.225410	5514.1

Muleros, Dona Ana County, N. Mex.

This is a station of the Salazar-Diaz Survey of 1852. It is about 1,220 feet north of International Boundary line and 2,700 feet west of International Boundary Monument No. 2. It is on the highest peak of Muleros Mountain.

Station mark: A bronze tablet stamped "Muleros" set in solid rock.

Reference mark: A bronze tablet set in solid rock, 12.79 feet distant, in azimuth 291° 50′ from the station mark.

[Latitude 31° 47′ 13.644″. Longitude 106° 32′ 43.476″.]

To station—	Azimuth. ° ′ ″	Back azimuth. ° ′ ″	Distance. At sea level, Log. meters.	Distance. Feet, surface.
International Boundary Monument No. 3...	83 51 26.8	263 50 17.9	3.538980	11351.2
I	109 31 55	289 30 00	3.785053	20003.9
J	116 10 05	296 06 55	4.026564	34884.0
L	129 07 00	309 03 00	4.202822	52322.0
RXI	135 04 35	315 02 30	3.972240	30782.4
RXH	141 28 30	321 25 21	4.183891	50113.3
RX	144 47 35	324 46 56	3.536426	11284.6
RXIII	158 14 14	338 11 21	4.377663	78293.4
Frontera	158 25 11	338 24 49	3.473629	9765.4
N. Franklin....	201 05 47.1	21 07 26.5	4.138313	45120.6
Inter. Bdy. Mon. No. 2 Ecc.....	294 35 47	114 36 04	2.959559	2989.7

RX, Dona Ana County, N. Mex.

This is a station of the Salazar-Diaz Survey of 1852. It is 0.55 mile west of Gibson's Crossing of Santa Fe Railway in cultivated field on land of T. D. Porcher.

Station mark: Standard concrete monument with bronze tablet stamped "Reference Point No. 45. RX".

[Latitude 31° 48′ 44.87″. Longitude 106° 33′ 58.85″.]

To station—	Azimuth. ° ′ ″	Back azimuth. ° ′ ″	Distance. At sea level, Log. meters.	Distance. Feet, surface.
Int. Bdy. Mon. No. 3.....	24 36 04	204 35 35	3.543798	11477.8
Station I.....	78 24 07	258 22 53	3.584510	12805.8
Station J.....	103 56 48	283 54 18	3.891518	25561.1
N. Franklin.....	214 40 00	34 42 20	4.085763	39978.4
Frontera	272 43 50	92 44 10	2.948923	2917.3
Muleros	324 46 56	144 47 35	3.536426	11284.6

RXI, Dona Ana County, N. Mex.

This is a station of the Diaz-Salazar Survey of 1852. It is 320 feet north and 3,160 feet west of highway bridge across Rio Grande west of the Country Club, 390 feet west of bridge across drainage ditch, 160 feet north of highway in cultivated field on land of S. N. Russell.

Station mark: A standard concrete monument with bronze tablet in top stamped "Reference Point No. 45. RXI".

[Latitude 31° 50′ 49.25″. Longitude 106° 36′ 55.42″.]

To station—	Azimuth. ° ′ ″	Back azimuth. ° ′ ″	Distance. At sea level, Log. meters.	Distance. Feet, surface.
Station J.....	56 08 26	236 07 27	3.545406	11520.5
Station L.....	120 42 19	300 40 23	3.825067	21934.6
Canutillo	143 28 46	323 26 37	4.032107	35332.1
North Franklin..	241 50 24	61 54 17	4.118040	43062.8
Muleros	315 02 30	135 04 35	3.972240	30782.4
I	349 09 05	169 09 23	3.670930	15381.3

RXII, Dona Ana County, N. Mex.

A station of the Salazar-Diaz Survey of 1852. It is 0.6 mile north of Borderland road, 2,200 feet west of a north-

south road in cultivated field on land now owned by J. N. Duke, from L. M. Crawford Survey.

Station mark: A standard concrete monument with bronze tablet stamped "RXII Reference Point No. 43".

[Latitude 31° 53′ 41.42″. Longitude 106° 38′ 45.45″.]

To station—	Azimuth. ° ′ ″	Back azimuth. ° ′ ″	Distance. At sea level, Log. meters.	Distance. Feet, surface.
Station J.....	0 10 22	180 10 21	3.860900	23821.6
Station L.....	56 29 56	236 28 59	3.534680	11239.4
Canutillo	133 35 49	313 34 38	3.686364	15937.7
Station P.....	140 16 58	320 15 29	3.804059	20898.8
Station Q.....	154 29 38	334 28 19	3.958930	29853.3
N. Franklin.....	266 27 44	86 32 35	4.161032	47543.8
Muleros	321 25 21	141 28 30	4.183891	50113.3

RXIII, Dona Ana County, N. Mex.

This is the most northerly station of the Salazar-Diaz Survey of 1852.

It is approximately 2.0 miles west of Anthony, N. Mex., about 640 feet north of an east-west road and nearly north from a bridge crossing irrigating canal. It is on land of Margaret Rowley.

Station mark: Standard concrete monument with bronze tablet stamped "RXIII Reference Point No. 42".

[Latitude 31° 59′ 13.00″. Longitude 106° 38′ 20.43″.]

To station—	Azimuth. ° ′ ″	Back azimuth. ° ′ ″	Distance. At sea level, Log. meters.	Distance. Feet, surface.
Canutillo	31 18 26	211 17 02	3.904890	26360.4
Station P.....	41 39 12	221 37 36	3.851974	23336.5
Station Q.....	66 21 33	246 20 01	3.698376	16384.7
N. Franklin.....	304 01 34	124 06 12	4.221550	54652.8
Muleros	338 11 21	158 14 14	4.377663	78296.4

Station I, Dona Ana County, N. Mex.

This is a station of the Salazar-Diaz Survey of 1852. Situated about 3.5 miles nearly due west from El Paso Power Company's plant, on top of mesa on sandy promon-

tory. There are small sand dunes of changing form and clusters of greasewood.

Station mark: An iron pipe 4 feet long driven 3 feet into the sand.

[Latitude 31° 48′ 19.77″. Longitude 106° 36′ 21.89″.]

To station—	Azimuth.			Back azimuth.			Distance.	
	°	′	″	°	′	″	At sea level, Log. meters.	Feet, surface.
Station J.....	124	53	20	304	52	03	3.665560	15192.2
Station L.....	140	24	50	320	22	45	4.017180	34138.3
Station RXI....	169	09	23	349	09	05	3.670930	15381.3
North Franklin..	224	42	45	44	46	20	4.181633	49653.4
RX	258	22	53	78	24	07	3.584510	12805.8
Frontera	261	03	41	81	05	15	3.672778	15446.9
Muleros	289	30	00	109	31	55	3.785053	20003.9

Station J, Dona Ana County, New Mex.

This is a station of the Salazar-Diaz Survey of 1852. Situated 4.2 miles west and 1,950 feet south of forks of highway at White's Spur, Santa Fe Railway. It is on top of mesa on a conspicuous promontory around which passes the Southern Pacific Company railroad on the east and north making a deep cut through the point of promontory. Station is several hundred feet back from the railroad on practically the highest ground in immediate vicinity. Land is very sandy with clusters of greasewood.

Station mark: An iron pipe 4 feet long driven 3 feet in the sand.

[Latitude 31° 49′ 45.73″. Longitude 106° 38′ 46.28″.]

To station—	Azimuth.			Back azimuth.			Distance.	
	°	′	″	°	′	″	Sea level, Log. meters.	Feet at surface.
Station L	152	10	09	332	09	13	3.783262	19921.6
Canutillo	161	45	50	341	44	40	4.048027	36651.3
RXII	180	10	21	0	10	22	3.860909	23821.6
RXI	236	07	27	56	08	26	3.545408	11520.5
North Franklin.	240	37	23	60	42	13	4.220642	54538.6
Frontera	282	45	42	102	48	31	3.937630	28424.4
RX	283	54	18	103	56	48	3.891518	25561.1
Muleros	296	06	55	116	10	05	4.026364	34884.0
I	304	52	03	124	53	20	3.665560	15192.2
International Bdy. Mon. 3.....	309	36	..	...	..	..	.....	.....

Station L, Dona Ana County, N. Mex.

This is a station of the Salazar-Diaz Survey of 1852. Situated on a conspicuous promontory about 0.9 mile south of Borderland road and about 4.6 miles west of Montoya. It is on top of mesa on very sandy land with clusters of greasewood.

It can be reached by driving west on Borderland road taking a second-class left-hand fork after leaving the valley lands. This road passes to the south of the promontory which can be reached by a short walk.

Station mark: An iron pipe 4 feet long driven 3 feet in the sand.

[Latitude 31° 52′ 40.02″. Longitude 106° 40′ 34.12″.]

To station—	Azimuth.			Back azimuth.			Distance.	
	°	′	″	°	′	″	At sea level, Log. meters.	Feet, surface.
Canutillo	172	47	29	352	47	15	3.722747	17330.4
RXII	236	28	59	56	29	56	3.534680	11239.4
N. Franklin	260	50	53	80	56	42	4.244019	57554.8
RXI	300	40	23	120	42	19	3.825067	21934.6
Frontera	302	49	32	122	53	12	4.128030	44064.8
Muleros	309	03	00	129	07	00	4.202822	52322.0
Station I	320	22	45	140	24	50	4.017180	34138.3
Station J	332	09	13	152	10	09	3.783262	19021.6

Station N or Canutillo, Dona Ana County, N. Mex.

This station corresponds with station N of the Salazar-Diaz Survey of 1852 and is also a station of the U. S. Geological Survey of 1917. About 0.85 mile north and 4.8 miles west of Canutillo, Texas. It is on top of mesa at a point where a long narrow ridge projects farthest east into sand hill. The bluffs are quite precipitous on the south, east, and north. It may be reached by car by taking road west from La Union to top of mesa, then turning south and following rim of mesa to the station.

Station mark: A concrete post 2 feet long, 7 inches square at bottom, 5 inches at top, set about 22 inches in ground and bronze tablet of U. S. Geological Survey in top.

[Latitude 31° 55′ 30.136″. Longitude 106° 40′ 59.324″.]

To station—	Azimuth.			Back azimuth.			Distance.	
	°	′	″	°	′	″	At sea level, Log. meters.	Feet, surface.
Station P	160	21	44	340	21	33	3.216274	5399.3
Station Q.....	175	16	33	355	16	25	3.688230	16006.4
Station RXIII..	211	17	02	31	18	26	3.904890	26360.4
Station O.....	243	53	48	63	54	45	3.499544	10365.9
N. Franklin.....	277	45	23.83	97	51	24.54	4.258747	59540.0
Station RXII...	313	34	38	133	35	49	3.686364	15937.7
Frontera	316	20	07	136	24	07	4.238154	56782.7
Station RXI ...	323	26	37	143	28	46	4.032107	35332.1
Station J.....	341	44	40	161	45	50	4.048027	36651.3
Station L.....	352	47	15	172	47	29	3.722747	17330.4

STATION O, DONA ANA COUNTY, N. MEX.

La Union, about 0.94 mile south and 0.45 mile east of Station O of the Salazar-Diaz Survey of 1852 would be to the west of this point but its visibility with stations L, N, P, and Q, would be cut off by grove of trees around farmhouse and its closeness to waste bank of drainage ditch, hence a position farther to the east was used. It is in a cultivated field.

Station mark: None.

[Latitude 31° 56′ 15.25″. Longitude 106° 39′ 11.33″.]

To station—	Azimuth.			Back azimuth.			Distance.	
	°	′	″	°	′	″	At sea level, Log. meters.	Feet, surface.
Canutillo	63	54	45	243	53	48	3.499544	10365.9
Station P.....	92	43	03	272	41	54	3.530615	11134.7
Station Q.....	137	00	33	316	59	27	3.676470	15578.7
North Franklin.	284	14	30	104	19	35	4.193704	51258.5

STATION P, DONA ANA COUNTY, N. MEX.

A station of the Salazar-Diaz Survey of 1852. La Union Crossroads, 0.8 mile south and 1.65 miles west of on top of mesa, on a projecting ridge.

A second-class road leads west from La Union. Stop just before road begins to climb mesa and walk southward following a ridge about 900 feet to the station.

Station mark: A concrete block of about 15 inches cubic dimensions in which is placed a copper bolt.

[Latitude 31° 56′ 20.45″. Longitude 106° 41′ 20.38″.]

To station—	Azimuth. ° ′ ″	Back azimuth. ° ′ ″	Distance. At sea level, Log. meters.	Distance. Feet, surface.
Q	182 36 39	2 36 42	3.520483	10877.9
RXIII	221 37 36	41 39 12	3.851974	23336.5
Station O.....	272 41 54	92 43 03	3.530615	11134.7
N. Franklin....	282 10 22	102 16 35	4.277797	62209.8
RXII.....	320 15 29	140 16 58	3.804059	20898.8
Canutillo	340 21 33	160 21 44	3.216274	5399.3

STATION Q, DONA ANA COUNTY, N. MEX.

This is a station of the Salazar-Diaz Survey of 1852. La Union Crossroad, 1.3 miles north and 1.65 miles west of, on a narrow projecting point from the mesa. At this point the projecting rock or caliche is only about 6 feet wide and is evidently gradually breaking away.

Station mark: A concrete block of approximately 15 inches cubic dimension with a copper bolt 6 inches long in top.

Reference Mark: A small iron bolt set in cement 11.05 feet distant in azimuth 127° 38′.

[Latitude 31° 58′ 07.97″. Longitude 106° 41′ 14.63″.]

To station—	Azimuth. ° ′ ″	Back azimuth. ° ′ ″	Distance. At sea level, Log. meters.	Distance. Feet, surface.
RXIII	246 20 01	66 21 33	3.698376	16384.7
N. Franklin....	291 41 09	111 47 19	4.296243	64909.0
Station O.....	316 59 27	137 00 33	3.676470	15578.7
RXII	334 28 19	154 29 38	3.958930	29853.3
Canutillo	355 16 25	175 16 33	3.688230	16006.4
Station P.....	2 36 42	182 36 39	3.520483	10877.9

DESCRIPTIONS AND GEOGRAPHIC POSITIONS ON 1927 NORTH AMERICAN DATUM OF BOUNDARY LINE MONUMENTS AND REFERENCE MONUMENTS ALONG OR ADJACENT TO THE NEW MEXICO-TEXAS BOUNDARY LINE IN THE RIO GRANDE VALLEY FROM THE PARALLEL OF 32 DEGREES SOUTHWARD TO THE PARALLEL OF 31 DEGREES 47 MINUTES

Monuments

All monuments, unless otherwise described, consist of a concrete base 24 by 24 by 24 inches set in the ground with top flush with the surface. A galvanized metal form 3 feet long, 14 inches in diameter at base, 8 inches in diameter at top, filled with concrete is embedded 6 inches in the concrete base, 30 inches showing above ground. The weight of each monument exceeds half a ton.

In center of top of the form a bronze tablet with inscription shown facing page 20 is cemented for boundary line monuments and a similar tablet with inscription shown facing page 54 is cemented for reference points or marks. The mean sea-level elevation given, as well as the geographic position, is in each instance that of the cross mark on the tablet cemented in top of the monument form.

In the total length of the boundary line, 25.17 miles, 105 monuments were set; the average distance between monuments is 0.24 mile; in addition, 45 reference monuments were set adjacent to the line and 6 triangulation stations were marked so that they can be identified at any time in the future.

Clark Monument No. 1

Clark Monument No. 1 as established by Scott-Cockrell Commission of 1911.

Anthony, N. Mex., 0.6 mile west of, 285 feet north of east-west road in a cultivated field owned by J. W. Bouldin. A concrete monument having a cubical base 28 inches square, with corners to the cardinal points, set 30 inches in the

BRONZE TABLET IMBEDDED IN TOP OF EACH
BOUNDARY LINE MONUMENT

THE SUPREME COURT OF THE UNITED STATES
BOUNDARY LINE
MONUMENT
NUMBER
COMMISSION 1928
PERMANENT FOR DISTINGUISHING
TEXAS
NEW MEXICO

ground, with a superstructure in the form of the frustrum of a cone encased in galvanized iron 24 inches in diameter at the base, 18 inches at the top and 22 inches high. In the top of the monument there is embedded a circular brass plate 6 inches in diameter, marked "NEW MEXICO" on the north and "TEXAS" on the south of an east-west division line.

Latitude 32° 00′ 02.324″. Longitude 106° 36′ 56.349″. Elevation 3789.768.

Gannett Monument No. 1

Anthony, N. Mex., 0.75 mile west of, 285 feet north of public road and nearly north of a bridge crossing irrigating canal, in cultivated field on land said to belong to J. W. Bouldin. A concrete monument with base 30 inches square and set 30 inches in the ground with a superstructure in the form of a frustrum of a cone encased in galvanized iron 24 inches in diameter at the base, 18 inches at the top, and standing 30 inches high. In the top is placed a bronze tablet 4 inches in diameter stamped "BOUNDARY MONUMENT No. 1. ELEVATION 3790."

Latitude 32° 00′ 02.324″. Longitude 106° 37′ 05.056." Elevation 3790.419.

Boundary Monument No. 2

Anthony, N. Mex., 0.8 mile west of, 1,500 feet south of public road in cultivated field owned by S. D. Blair and about 500 feet east of Mr. Blair's house.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 2. Elev. 3,790."

Latitude 31° 59′ 44.496″. Longitude 106° 37′ 07.482″. Elevation 3790.393.

Boundary Monument No. 3

Anthony, N. Mex., 1 mile west of, 0.6 south of main east-west highway, on low, uncultivated, brushy land owned by A. A. Howell. It is 390 feet S. 42° W. (true) from point where line crosses drainage ditch. A standard concrete

monument with bronze tablet stamped "Boundary Monument No. 3. Elev. 3,785."

Latitude 31° 59′ 30.876″. Longitude 106° 27′ 22.020″. Elevation 3,785.448.

Boundary Monument No. 4

Anthony, N. Mex., 1.25 miles west of, 0.5 mile southeast of highway bridge across river, 125 feet east of cut bank at dividing line between sandy bed of river and vegetation; brushy, uncultivated land owned by A. A. Hornell.

Standard concrete monument stamped "Boundary Monument No. 4. Elev. 3,786."

Latitude 31° 59′ 29.058″ Longitude 106° 37′ 34.822″. Elevation 3,786.373.

Angle Point 4-a

Boundary position in Rio Grande of 1930, between Monuments 4 and 5. This position of an angle point on boundary line comes in the bed of the Rio Grande of 1930 and hence no monument was built. Water was about 4 inches deep on January 28, 1930. An iron pipe 4 feet long is driven 3 feet into the sandy bed of the river. This angle point is on prolongation of line from Monument 3 to Monument 4, true bearing S. 80° 32′ 30″ W. and is 1,411.06 feet distant from Monument 4. It is also on prolongation of line from Monument 6 to Monument 5; true bearing N. 48° 52′ 42″ E. and is 450.85 feet distant from Monument 5.

Latitude 31° 59′ 26.764″. Longitude 106° 37′ 50.980″.

Boundary Monument No. 5

Anthony, N. Mex., 1.5 miles west of and approximately 0.65 mile south of highway bridge across the Rio Grande. It is on west bank of the river, 35 feet southwest from cut bank in fringe of timber and brush bordering river. Land is owned by Jesus Rivas.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 5. Elev. 3,786."

Latitude 31° 59′ 23.831″. Longitude 106° 37′ 54.923″. Elevation 3,785.777.

Boundary Monument No. 6

Anthony, N. Mex., 1.8 miles west and 0.9 mile south of, 560 feet north of east-west road, and about 950 feet east of crossroads which are 35 feet west of bridge crossing irrigating canal, in cultivated field of Margaret Rowley just west of an irrigating ditch.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 6. Elev. 3,790."

Latitude 31° 59′ 12.206″. Longitude 106° 38′ 10.547″. Elevation 3,789.989.

Reference Monument 42 or RXIII

This is a reestablished triangulation station of the Salazar-Diaz Survey of 1852. It is approximately 2.0 miles west and 1. mile south of Anthony, N. Mex., about 640 feet north of an east-west road and nearly north from a bridge crossing irrigating canal.

Standard concrete monument with bronze tablet stamped "RXIII Reference Monument No. 42. Elev. 3791."

Latitude 31° 59′ 13.000″. Longitude 106° 38′ 20.430″. Elevation 3790.714.

Boundary Monument No. 7

Anthony, N. Mex., 2.0 miles west and 1.3 miles south of, 185 feet west of a road on west side of irrigating canal, 90 feet N. 73° W. true from corner of an adobe house in cultivated field owned by J. O. Westlake.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 7. Elev. 3788."

Latitude 31° 58′ 52.404″. Longitude 106° 38′ 20.957″. Elevation 3788.261.

Boundary Monument No. 8

Vinton, 1.9 miles north and 2.0 miles west of, 65 feet west of roadway along west side of drainage canal, 12 feet west of fence, in cultivated field owned by J. O. Westlake.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 8. Elev. 3788."

Latitude 31° 58′ 40.190″. Longitude 106° 38′ 16.348″. Elevation 3787.582.

Boundary Monument No. 9

Vinton, 1.8 miles north and 1.9 miles west of, 300 feet north of an east-west road, 70 feet northwest of northwest corner of house of J. J. Hoskins.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 9. Elev. 3786."

Latitude 31° 58′ 34.053″. Longitude 106° 38′ 06.184″. Elevation 3785.658.

Boundary Monument No. 10

Vinton, 1.75 miles north and 1.85 miles west of, 50 feet south of east-west highway in cultivated field owned by D. P. Stewart.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 10. Elev. 3785."

Latitude 31° 58′ 30.401″. Longitude 106° 38′ 00.532″. Elevation 3784.620.

Boundary Monument No. 11

Vinton, 1.5 miles north and 1.5 miles west of, 1,140 feet south of east and west road, in cultivated field on Gowan Jones farm.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 11. Elev. 3785."

Latitude 31° 58′ 19.633″. Longitude 106° 37′ 47.013″. Elevation 3784.683.

Boundary Monument No. 12

Vinton, 1.45 miles north and 1.4 miles west of, just at east edge of highway which passes along west side of drainage ditch, 55 feet west of a two-story adobe house, on land of D. P. Stewart.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 12. Elev. 3787."
Latitude 31° 58′ 17.636″. Longitude 106° 37′ 33.504″. Elevation 3787.275.

Boundary Monument No. 13

Vinton, 1.6 miles north and 1.2 miles west of, in cultivated field on land of D. P. Stewart and about 1,100 feet northeast of house. Concrete monument with bronze tablet in top stamped "Boundary Monument No. 13. Elev. 3782."
Latitude 31° 58′ 24.625″. Longitude 106° 37′ 21.575″. Elevation 3782.060.

Boundary Monument No. 14

Vinton, 1.60 miles north and 1.1 miles west of, in cultivated field on land owned by D. P. Stewart.
Standard concrete monument with bronze tablet stamped "Boundary Monument No. 14. Elev. 3782."
Latitude 31° 58′ 24.898″. Longitude 106° 37′ 16.658″. Elevation 3782.137.

Boundary Monument No. 15

Vinton, 1.5 miles north and 1.0 mile west of, near northeast corner of land owned by Hemly and Rishaberger just on east slope of an irrigating ditch, 10 feet east of a cottonwood tree and 25 feet southeast of a cottonwood tree.
Concrete monument with bronze tablet stamped "Boundary Monument No. 15. Elev. 3784."
Latitude 31° 58′ 19.276″. Longitude 106° 37′ 07.896″. Elevation 3783.745.

Boundary Monument No. 16

Vinton, 1.20 miles north and 0.9 mile west of, in cultivated field on land owned by Gus Eminger.
Standard concrete monument with bronze tablet in top stamped "Boundary Monument No. 16. Elev. 3781."
Latitude 31° 58′ 03.869″. Longitude 106° 37′ 04.232″. Elevation 3780.514.

Boundary Monument No. 17

Vinton, 1.0 mile north and 0.85 mile west of, about 0.25 mile N. 73° E. true from house of Gus Eminger, on land owned by Hemley and Rishaberger.

Standard concrete monument with tablet stamped "Boundary Monument No. 17. Elevation 3781."

Latitude 31° 57′ 55.730″. Longitude 106° 37′ 06.552″. Elevation 3780.584.

Boundary Monument No. 18

Vinton, 0.9 mile north and 1.0 mile west of, about 1,000 feet S. 70° E. from residence of Gus Eminger, in cultivated field on land owned by Hemley and Rishaberger.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 18. Elev. 3780."

Latitude 31° 57′ 50.250″. Longitude 106° 37′ 09.692″. Elevation 3779.686.

Boundary Monument No. 19

Vinton, 0.85 mile north and 1.1 miles west of, about 800 feet southeast from residence of Gus Eminger, 80 feet northeast from angle of roadway, in cultivated field owned by Hemley and Rishaberger.

Standard concrete monument with tablet stamped "Boundary Monument No. 19. Elev. 3780."

Latitude 31° 57′ 45.906″. Longitude 106° 37′ 15.830″. Elevation 3779.648.

Boundary Monument No. 20

Vinton, 0.65 mile north and 1.20 miles west of, about 1,250 feet north and 420 feet east of entrance to Price's dairy, in cultivated field on land said to belong to E. D. White and 15 feet northwest of property line between White and Price.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 20. Elev. 3778".

Latitude 31° 57′ 39.510″. Longitude 106° 37′ 26.345″. Elevation 3778.150.

Boundary Monument No. 21

Vinton, 0.5 mile north and 1.3 miles west of, just north of Price's dairy, 300 feet north of Price's residence, 35 feet west of entrance to dairy farm and 22 feet north of east-west road, in ditch at roadside.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 21. Elev. 3776".

Latitude 31° 57′ 27.317″. Longitude 106° 37′ 31.301″. Elevation 3775.980.

Boundary Monument No. 22

Vinton, 0.3 mile north and 1.25 miles west of, 1,160 feet south of east-west highway and about 300 feet southeast of Price's Dairy barn, 75 feet southeast of a corral.

Standard concrete monument, with bronze tablet, stamped "Boundary Monument No. 22. Elev. 3777".

Latitude 31° 57′ 15.641″. Longitude 106° 37′ 28.771″. Elevation 3777.223.

Boundary Monument No. 23

Vinton, 0.15 mile north and 1.15 miles west of, 1,750 feet south of east-west public road, and 0.25 mile southeast of silos at Price's dairy, in cultivated field on land of Theo. Price.

Standard concrete monument with bronze tablet stamped "Boundary Monument No 23. Elev. 3777".

Latitude 31° 57′ 09.801″. Longitude 106° 37′ 20.358″. Elevation 3777.314.

Boundary Monument No. 24

Vinton, 0.35 mile north and 1.0 mile west of, about 1,800 feet east of Price's dairy buildings, 850 feet south of east-west highway, 300 feet west of a drainage ditch, in center of an irrigating ditch, land owned by Price's dairy.

Standard concrete monument with bronze tablet in top stamped "Boundary Monument No. 24. Elev. 3776".

Latitude 31° 57′ 18.577″. Longitude 106° 37′ 07.837″. Elevation 3775.950.

Boundary Monument No. 25

Vinton, 0.4 mile north and 0.8 mile west of, 0.4 mile east of Price's dairy buildings, 700 feet south of east-west road, 70 feet east of drainage ditch, in cultivated field on land owned by Hemly and Rishaberger.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 25. Elev. 3776".

Latitude 31° 57′ 20.590″. Longitude 106° 37′ 03.463″. Elevation 3776.302.

Boundary Monument No. 26

Vinton, 0.4 mile north and 0.7 mile west of, 0.6 mile east of Price's dairy 40 feet west of an irrigating ditch, at edge of cultivated field, on land owned by Hemly and Rishaberger.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 26. Elevation 3776".

Latitude 31° 57′ 22.107″. Longitude 106° 36′ 51.197″. Elevation 3776.364.

Boundary Monument No. 27

Vinton, 0.1 mile north and 0.65 mile west of, just on east edge of an irrigating ditch, on land said to be owned by T. Sugahara.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 27. Elev. 3774".

Latitude 31° 57′ 06.802″. Longitude 106° 36′ 49.694″. Elevation 3774.014.

Boundary Monument No. 28

Vinton, 0.1 mile south and 0.7 mile west of, about 800 feet west of the Rio Grande of 1930, 50 feet south of a second class roadway and 200 feet east of adobe house of T. Sugahara who is reported to own the land.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 28. Elevation 3773".

Latitude 31° 56′ 56.313″. Longitude 106° 36′ 53.081″. Elevation 3773.202.

Boundary Monument No. 29

There is no boundary monument No. 29.

Boundary Monument No. 30

Vinton, 0.2 mile south and 0.7 mile west of, 150 feet southeast of a drainage canal, on land owned by Mr. Chavez.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 30. Elev. 3771".

Latitude 31° 56′ 48.668″. Longitude 106° 37′ 05.934″. Elevation 3771.205.

Boundary Monument No. 31

Vinton, 0.35 mile south and 1.15 miles west of, 150 feet north of a drainage ditch, 800 feet west of house of Mr. Chavez on whose land it is.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 31. Elev. 3776".

Latitude 31° 56′ 42.947″. Longitude 106° 37′ 22.751″. Elevation 3775.889.

Boundary Monument No. 32

Canutillo, 1.9 miles north and 1.2 miles west of, in middle of cultivated field owned by M. J. Garrett.

Standard concrete monument with bronze tablet stamped "Boundary Monument No. 32. Elevation 3772".

Latitude 31° 56′ 25.356″. Longitude 106° 37′ 18.312″. Elevation 3772.491.

Boundary Monument No. 33

Canutillo, 1.6 miles north and 1.2 miles west of, in middle of cultivated field on land owned by Mrs. H. L. Boxberger;

standard concrete monument, with bronze tablet stamped "Boundary Monument No. 33. Elev. 3771".

Latitude 31° 56′ 08.449″. Longitude 106° 37′ 17.316″. Elevation 3771.237.

Boundary Monument No. 34

Canutillo, 1.2 miles north and 1.40 miles west of, 450 feet east of an irrigating canal in cultivated field on land of Mrs. H. L. Boxberger; standard concrete monument with bronze tablet stamped "Boundary Monument No. 34. Elev. 3771".

Latitude 31° 55′ 55.621″. Longitude 106° 37′ 22.635″. Elevation 3771.147.

Boundary Monument No. 35

Canutillo, 1.2 miles north and 1.40 miles west of, 450 feet west of a roadway on west side of irrigating canal, in cultivated field on land owned by F. M. Dunlap; standard concrete monument with bronze tablet stamped "Boundary Monument No. 35. Elev. 3770".

Latitude 31° 55′ 46.227″. Longitude 106° 37′ 30.543″. Elevation 3770.348.

Boundary Monument No. 36

Canutillo, 1.0 mile north and 1.5 miles west of, 280 feet east of a public road in field owned by Fred W. Freeman; standard concrete monument with bronze tablet stamped "Boundary Monument No. 36. Elev. 3770".

Latitude 31° 55′ 40.984″. Longitude 106° 37′ 38.172″. Elevation 3770.403.

Boundary Monument No. 37

Canutillo, 0.9 mile north and 1.65 miles west of, 450 feet west of a public road in cultivated field on land owned by P. H. Bailey; standard concrete monument with bronze tablet stamped "Boundary Monument No. 37. Elev. 3770".

Latitude 31° 55′ 35.587″. Longitude 106° 37′ 45.149″. Elevation 3770.028.

Boundary Monument No. 38

Canutillo, 0.7 mile north and 1.6 miles west of, 350 feet west of a public road in cultivated field on land owned by P. H. Bailey; standard concrete monument with bronze tablet stamped "Boundary Monument No. 38. Elev. 3770".

Latitude 31° 55′ 24.779″. Longitude 106° 37′ 41.132″. Elevation 3770.001.

Boundary Monument No. 39

Canutillo, 0.85 mile north and 1.35 miles west of, 45 feet west of an irrigating canal, 10 feet west of center of roadway, on land owned by F. W. Freeman; standard concrete monument with bronze tablet stamped "Boundary Monument No. 39. Elev. 3768".

Latitude 31° 55′ 31.254″. Longitude 106° 37′ 26.076″. Elevation 3768.298.

Boundary Monument No. 40

Canutillo, 0.8 mile north and 1.2 miles west of, 850 feet east of irrigating canal, in cultivated field on land owned by F. W. Freeman; standard concrete monument with bronze tablet stamped "Boundary Monument No. 40. Elev. 3769".

Latitude 31° 55′ 27.489″. Longitude 106° 37′ 15.587″. Elevation 3769.084.

Boundary Monument No. 41

Canutillo, 0.65 mile north and 1.0 mile west of, about 1,000 feet S. 63° W. true from dairy buildings at Gillett's dairy, in cultivated field owned by Gillett dairy farm; standard concrete monument with bronze tablet stamped "Boundary Monument No. 41. Elev. 3769".

Latitude 31° 55′ 19.785″. Longitude 106° 37′ 04.805″. Elevation 3768.601.

Boundary Monument No. 42

Canutillo, 0.55 mile north and 0.8 mile west of, 2,250 feet north of east-west road, 250 feet east of roadway to Gillett's dairy, in cultivated field owned by John Van Horn; standard concrete monument with bronze tablet stamped "Boundary Monument No. 42. Elev. 3768".

Latitude 31° 55′ 16.620″. Longitude 106° 36′ 51.295″. Elevation 3768.468.

Boundary Monument No. 43

Canutillo, 0.5 mile north and 0.7 mile west of, 1,900 feet north of east-west road, 820 feet east of road to Gillett's dairy in cultivated field owned by John Van Horn who lives to the south on the road to Canutillo; standard concrete monument with bronze tablet stamped "Boundary Monument No. 43. Elev. 3767".

Latitude 31° 55′ 13.178″. Longitude 106° 36′ 44.275″. Elevation 3766.642.

Boundary Monument No. 44

Canutillo, 0.3 mile north and 0.85 mile west of, 750 feet north of east-west road, 400 feet S. 38° W. from point where line crosses drainage canal, in cultivated field on land owned by Gillett's dairy farm; standard concrete monument with bronze tablet stamped "Boundary Monument No. 44. Elev. 3767".

Latitude 31° 55′ 01.871″. Longitude 106° 36′ 54.537″. Elevation 3766.660.

Boundary Monument No. 45

Canutillo, 0.3 mile south and 1.05 miles west of, 530 feet N. 37° 30′ E. true from center of road in front of James Hibbert's house, in cultivated field on land owned by R. L. Hibbert; standard concrete monument with bronze tablet stamped "Boundary Monument No. 45. Elev. 3767".

Latitude 31° 55′ 03.355″. Longitude 106° 37′ 05.887″. Elevation 3767.366.

Boundary Monument No. 46

Canutillo, 1.4 miles west of, 185 feet east of a north-south road, 140 feet east of an irrigating canal, in cultivated field near southwest corner of property owned by Minnie M. Hibbert; standard concrete monument with bronze tablet stamped "Boundary Monument No. 46. Elev. 3768".

Latitude 31° 54′ 47.168″. Longitude 106° 37′ 25.253″. Elevation 3767.613.

Boundary Monument No. 47

Canutillo, 0.15 mile south and 1.55 miles west of, 830 feet north and 1,050 feet west of a crossroads, in cultivated field on land owned by Henry Cordell; standard concrete monument with bronze tablet stamped "Boundary Monument No. 47. Elev. 3767".

Latitude 31° 54′ 40.401″. Longitude 106° 37′ 39.674″. Elevation 3767.000.

Boundary Monument No. 48

Canutillo, 0.25 mile south and 1.9 miles west of, 300 feet north of east-west public road, on south side of drainage ditch at foot of waste bank, on land owned by J. T. Kennedy; standard concrete monument with bronze tablet stamped "Boundary Monument No. 48. Elev. 3767".

Latitude 31° 54′ 34.940″. Longitude 106° 37′ 59.102″. Elev. 3766.984.

Boundary Monument No. 49

Canutillo, 0.5 mile south and 2.15 miles west of, about 175 feet northwest of a public road and 90 feet northwest of a drainage ditch and 190 feet northeast of a second drainage ditch, in a cultivated field on land owned by G. E. Kennedy; standard concrete monument with bronze tablet stamped "Boundary Monument No. 49. Elev. 3765".

Latitude 31° 54′ 25.212″. Longitude 106° 38′ 13.352″. Elevation 3765.459.

Boundary Monument No. 50

Canutillo, 0.55 mile south and 2.3 miles west of, 210 feet N. 16° W. from northeast corner of residence of J. N. Duke on whose land the monument is located; standard concrete monument with bronze tablet stamped "Boundary Monument No. 50. Elev. 3767".

Latitude 31° 54′ 18.031″. Longitude 106° 38′ 24.013″. Elevation 3766.888.

Boundary Monument No. 51

Canutillo, 0.75 mile south and 2.50 miles west of, 475 feet north of east-west road which is the northern boundary of the Santa Teresa land grant, 1,215 feet west of cross-roads, in cultivated field on land owned by L. L. Lewis; standard concrete monument with bronze tablet stamped "Boundary Monument No. 51. Elev. 3767".

Latitude 31° 54′ 07.508″. Longitude 106° 38′ 34.362″. Elevation 3766.518.

Boundary Monument No. 52

Canutillo, 1.0 mile south and 2.6 miles west of, 1,980 feet west of a north-south road and 900 feet south of an east-west road in cultivated field on land owned by Wesley Black; standard concrete monument with bronze tablet stamped "Boundary Monument No. 52. Elev. 3766".

Latitude 31° 53′ 54.162″. Longitude 106° 38′ 43.080″. Elevation 3766.074.

Boundary Monument No. 53

Canutillo, 1.25 miles south of, 2.6 miles west of, 0.6 mile north of Borderland road, and 2,060 feet west of north and south road, in cultivated field on land now owned by J. N. Duke from L. M. Crawford Survey; standard concrete monument with bronze tablet stamped "Boundary Monument No. 53. Elev. 3,765."

Latitude 31° 53′ 42.009″. Longitude 106° 38′ 43.679″. Elevation 3765.356.

Reference Monument No. 43 = RXII

This is a reestablished triangulation station of the Salazar-Diaz Survey of 1852. It is 0.6 mile north of Borderland road, 2,200 feet west of north-south road, in cultivated field on land owned by J. N. Duke, from L. M. Crawford Survey; standard concrete monument with bronze tablet stamped "Reference Monument No. 43 RXII. Elev. 3767."

Latitude 31° 53′ 41.420″. Longitude 106° 38′ 45.446″. Elevation 3767.314.

Boundary Monument No. 54

Borderland Gin, 1.15 miles west of, 2,500 feet north of Borderland road, 1,200 feet west of north-south road, in cultivated field on land owned by J. N. Duke, in the L. M. Crawford Survey; standard concrete monument with bronze tablet stamped "Boundary Monument No. 54. Elev. 3766."

Latitude 31° 53′ 33.399″. Longitude 106° 38′ 33.601″. Elevation 3765.785.

Boundary Monument No. 55

Borderland Gin, 1.05 miles west and 2,400 feet north of, 700 feet west of north-south road in cultivated field on land owned by H. C. Mandell; standard concrete monument with bronze tablet stamped "Boundary Monument No. 55. Elev. 3766."

Latitude 31° 53′ 32.546″. Longitude 106° 38′ 27.812″. Elevation 3765.628.

Boundary Monument No. 56

Borderland Gin, 0.9 mile west of, 2,200 feet north of Borderland road, 35 feet east of north-south road, 0.25 mile south of dairy ranch; standard concrete monument with bronze tablet stamped "Boundary Monument No. 56. Elev. 3763."

Latitude 31° 53′ 30.420″. Longitude 106° 38′ 19.421″. Elevation 3763.251.

Boundary Monument No. 57

Borderland Gin, 0.75 mile west of, 1,730 feet north of Borderland road, 850 feet east of north-south road, 325 feet west of drainage ditch, in cultivated field of W. S. Taylor; standard concrete monument with bronze tablet stamped "Boundary Monument No. 57. Elev. 3762."

Latitude 31° 53′ 25.784″. Longitude 106° 38′ 09.913″. Elevation 3761.606.

Boundary Monument No. 58

Borderland Gin, 0.6 mile west of, 1,000 feet north of Borderland road, 680 feet east of drainage ditch, in cultivated field on land owned by W. E. Clem; standard concrete monument with bronze tablet stamped "Boundary Monument No. 58. Elev. 3761."

Latitude 31° 53′ 18.598″. Longitude 106° 37′ 59.757″. Elevation 3761.216.

Boundary Monument No. 59

Borderland Gin, 2,250 feet west of, 90 feet north of center of road, in cultivated field on land owned by W. E. Clem who lives just west of the monument; standard concrete monument with bronze tablet stamped "Boundary Monument No. 59. Elevation 3759."

Latitude 31° 53′ 09.549″. Longitude 106° 37′ 49.050″. Elevation 3759.429.

Boundary Monument No. 60

Borderland Gin, 1,825 feet west of, 875 feet south of Borderland road, in cultivated field on land owned by Wm. Rosing; standard concrete monument with bronze tablet stamped "Boundary Monument No. 60. Elev. 3759."

Latitude 31° 52′ 59.980″. Longitude 106° 37′ 44.121″. Elevation 3758.724.

Boundary Monument No. 61

Borderland Gin, 1,960 feet west and 1,670 feet south of, in cultivated field on land owned by Wm. Rosing; standard

concrete monument with bronze tablet stamped "Boundary Monument No. 61. Elev. 3758."

Latitude 31° 52′ 52.091″. Longitude 106° 37′ 45.677″. Elevation 3758.431.

Boundary Monument No. 62

Borderland Gin, 2,780 feet south and 2,450 feet west of, in cultivated field on land owned by Sam Wade who lives on the land just south of Borderland road; standard concrete monument with bronze tablet stamped "Boundary Monument No. 62. Elev. 3758."

Latitude 31° 52′ 41.107″. Longitude 106° 37′ 51.343″. Elevation 3758.363.

Boundary Monument No. 63

Borderland Gin, 0.8 mile south and 0.7 mile west of, 500 feet north of an east-west road, 30 feet west of cut bank of drainage ditch, on side of waste bank; standard concrete monument with bronze tablet stamped "Boundary Monument No. 63. Elev. 3764."

Latitude 31° 52′ 25.393″. Longitude 106° 38′ 03.564″. Elevation 3763.503.

Boundary Monument No. 64

Borderland Gin, 1.1 miles south and 0.75 mile west of, in cultivated field on land owned by Cathcart and Mason; standard concrete monument with bronze tablet stamped "Boundary Monument No. 64. Elev. 3755."

Latitude 31° 52′ 09.978″. Longitude 106° 38′ 07.960″. Elevation 3755.154.

Boundary Monument No. 65

Borderland Gin, 1.35 miles south and 0.7 mile west of, 150 feet east of an irrigating ditch, in cultivated field on land owned by Cathcart and Mason; standard concrete monument with bronze tablet stamped "Boundary Monument No. 65. Elev. 3755."

Latitude 31° 51′ 58.293″. Longitude 106° 38′ 06.759″. Elevation 3755.095.

Boundary Monument No. 66

Rio Grande highway bridge on Country Club road, 1.2 miles north and 1.55 miles west of, on west side of drainage ditch, on top of waste bank; standard concrete monument with bronze tablet stamped "Boundary Monument No. 66. Elev. 3762."

Latitude 31° 51′ 49.169″. Longitude 106° 37′ 54.330″. Elevation 3762.172.

Boundary Monument No. 67

Rio Grande bridge, 1.2 miles north and 1.55 miles west of, on east bank of drainage ditch, 20 feet from waters edge; standard concrete monument with bronze tablet stamped "Boundary Monument No. 67. Elev. 3756."

Latitude 31° 51′ 48.501″. Longitude 106° 37′ 53.305″. Elevation 3756.200.

Boundary Monument No. 68

Rio Grande bridge, 1.0 mile north and 1.3 miles west of, 1,160 feet south and 700 feet west of right angle in paved highway, in cultivated field on land owned by Stevens and Channell; standard concrete monument with bronze tablet stamped "Boundary Monument No. 68. Elev. 3753."

Latitude 31° 51′ 40.652″. Longitude 106° 37′ 39.694″. Elevation 3752.798.

Boundary Monument No. 69

Rio Grande bridge, 1.0 mile north and 1.3 miles west of, 125 feet N. 31° W. from a cottonwood tree, in cultivated field on land owned by Stevens and Channell; standard concrete monument with bronze tablet stamped "Boundary Monument No. 69. Elev. 3753."

Latitude 31° 51′ 37.062″. Longitude 106° 37′ 36.870″. Elevation 3752.613.

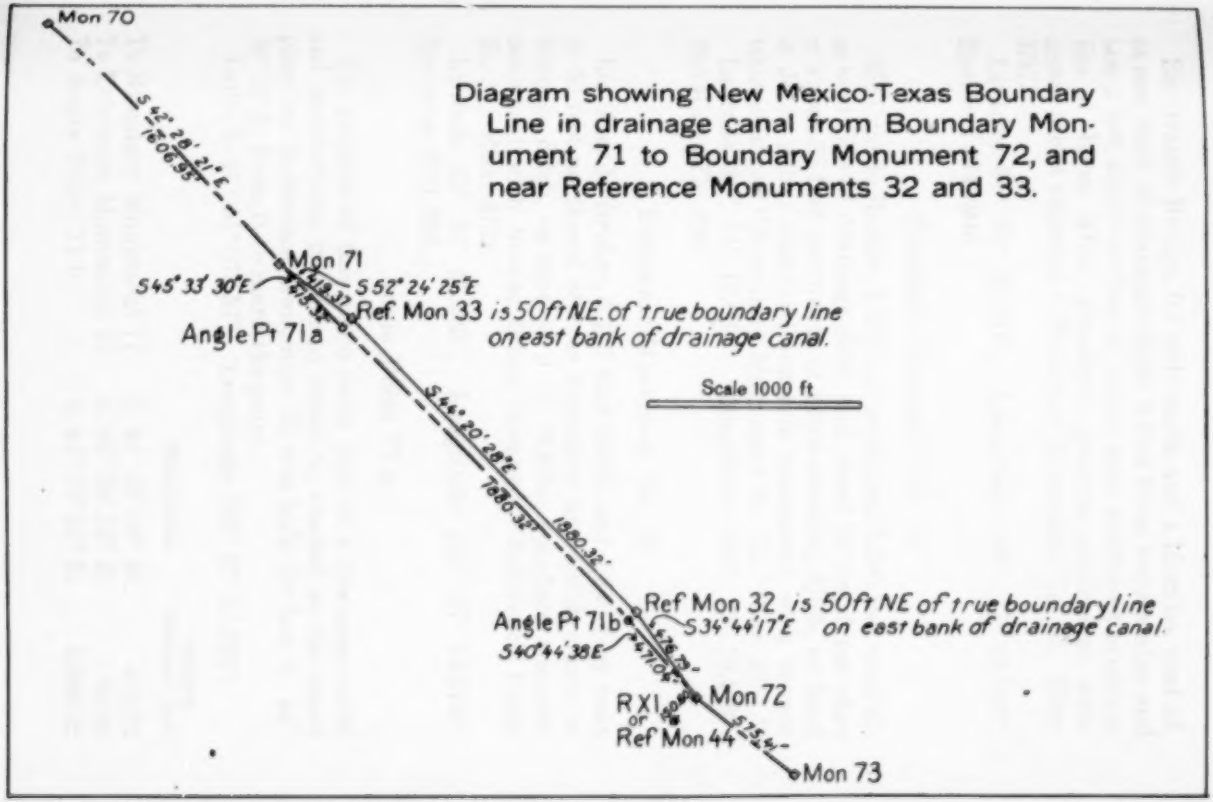


Diagram showing New Mexico-Texas Boundary Line in drainage canal from Boundary Monument 71 to Boundary Monument 72, and near Reference Monuments 32 and 33.
Mon 70
S 42° 28' 21" E
7806.95'
Mon 71
S 45° 33' 30" E
419.37'
S 52° 24' 25" E
Ref. Mon 33 is 50 ft NE. of true boundary line on east bank of drainage canal.
Angle Pt 71a
Scale 1000 ft
S 44° 20' 28" E
7886.32'
1980.32'
Ref Mon 32 is 50 ft NE of true boundary line on east bank of drainage canal.
S 34° 44' 17" E
Angle Pt 71b
S 40° 44' 38" E
4710'
Mon 72
R X 1
or
Ref Mon 44
Mon 73

Boundary Monument No. 70

Rio Grande Bridge, 0.7 mile north and 1.15 miles west of, on east bank of drainage ditch, 8 feet from waters edge and base 2 feet above surface of water, near southwest property line of Jesus Alba; standard concrete monument with bronze tablet stamped "Boundary Monument No. 70. Elev. 3747."

Latitude 31° 51′ 21.761″. Longitude 106° 37′ 29.003″. Elevation 3746.946.

Boundary Monument No. 71

Rio Grande Bridge, 2,400 feet north and 5,000 feet west of, on west side of drainage ditch and about 10 feet from edge of water, 35 feet northwest of flume crossing ditch, on land of Jesus Alba; standard concrete monument with bronze tablet stamped "Boundary Monument No. 71. Elev. 3751."

Latitude 31° 51′ 10.034″. Longitude 106° 37′ 16.428″. Elevation 3751.300.

Reference Monument No. 33

Rio Grande Bridge, 2,170 feet north and 4,640 feet west of, 50 feet northeast of true boundary line which comes in drainage ditch, on land of J. C. White; standard concrete monument with bronze tablet stamped "Reference Point No. 33. Elev. 3751."

Latitude 31° 51′ 07.503″. Longitude 106° 37′ 12.579″. Elevation 3751.326.

Angle Point 71-a

The position of this angle point falls in a drainage canal and therefore no monument could be erected at the exact place but Reference Monument 33 was built 50 feet N. 45° 39° 32′ E. from it to mark the point.

Latitude 31° 51′ 07.157″. Longitude 106° 37′ 12.993″.

	True course	Surface distance, feet
To Boundary Monument 71	N. 45° 33′ 30″ W.	415.32
To Reference Monument 33	N. 45° 39′ 32″ E.	50.00
To Angle Point 71-b	S. 44° 20′ 28″ E.	1,880.32

Angle Point 71-b

The position of this angle point falls in the same drainage canal as 71-a and Reference Monument 32 was erected N. 45° 39′ 32″ E., 50 feet distant to mark the point.

Latitude 31° 50′ 53.851″. Longitude 106° 36′ 57.762″.

	True course	Surface distance, feet
To 71-a	N. 44° 20′ 28″ W.	1,880.32
To Reference Monument 32	N. 45° 39′ 32″ E.	50.00
To Boundary Monument 72	S. 40° 44′ 38″ E.	471.04

Reference Monument No. 32

Rio Grande Bridge, 820 feet north and 3,330 feet west of, 50 feet northeast of the true boundary line which comes in drainage ditch; the line between Reference Monuments Nos. 32 and 33 being parallel to and 50 feet northeast of the true boundary line; standard concrete monument with bronze tablet stamped "Reference Point No. 32. Elev. 3751."

Latitude 31° 50′ 54.197″. Longitude 106° 36′ 57.348″. Elevation 3750.830.

Boundary Monument No. 72

Rio Grande Bridge, 430 feet north and 3,060 feet west of, 270 feet north of east-west highway on west bank of drainage ditch and between water's edge and waste pile, on land of S. N. Russell; standard concrete monument with bronze tablet stamped "Boundary Monument No. 72. Elev. 3749."

Latitude 31° 50′ 50.320″. Longitude 106° 36′ 54.202″. Elevation 3749.316.

RXI or Reference Monument No. 44

Rio Grande Bridge, 320 feet north and 3,160 feet west of, 160 feet north of highway and 390 feet west of bridge across drainage ditch, in cultivated field on land of S. N. Russell; standard concrete monument with bronze tablet stamped "Reference Monument No. 44 RXI Elev. 3750." This is a

reestablishment of triangulation station of the Salazar-Diaz Survey of 1852.

Latitude 31° 50′ 49.252″. Longitude 106° 36′ 55.420″. Elev. 3749.527.

Boundary Monument No. 73

Rio Grande Bridge, 70 feet north and 2,600 feet west of, 90 feet south of road and 160 feet east of bridge over drainage ditch, on land of A. M. Heineman; standard concrete monument with bronze tablet stamped "Boundary Monument No. 73. Elev. 3750."

Latitude, 31° 50′ 46.751″. Longitude 106° 36′ 49.009″. Elevation 3749.869.

Boundary Monument No. 74

Rio Grande Bridge, 70 feet north and 950 feet west of, 67 feet south of center of paved road at edge of field on land owned by Z. T. White; standard concrete monument with bronze tablet stamped "Boundary Monument No. 74. Elev. 3751."

Latitude 31° 50′ 47.459″. Longitude 106° 36′ 29.773″. Elevation 3751.194.

Boundary Monument No. 75

Rio Grande Bridge, 100 feet south and 120 feet east of east end of, in brushy thicket, on land of L. M. Crawford; standard concrete monument with bronze tablet stamped "Boundary Monument No. 75. Elev. 3749."

Latitude 31° 50′ 44.650″. Longitude 106° 36′ 15.396″. Elevation 3748.661.

Boundary Monument No. 76

Rio Grande Bridge, 680 feet south and 1,260 feet east of, 0.75 mile northwest of Country Club in cultivated field on land of M. B. White and L. M. Crawford; standard concrete monument with bronze tablet stamped "Boundary Monument No. 76. Elev. 3750."

Latitude 31° 50′ 39.352″. Longitude 106° 36′ 04.130″. Elevation 3750.397.

Boundary Monument No. 77

Rio Grande Bridge, 0.45 mile south and 0.25 mile east of, 0.50 mile west of Country Club, 165 feet east of levee roadway, on uncultivated land on property of O. C. Coles and L. M. Crawford; standard concrete monument with bronze tablet stamped "Boundary Monument No. 77. Elev. 3749."

Latitude 31° 50′ 22.010″. Longitude 106° 36′ 03.378″. Elevation 3749.260.

Boundary Monument No. 78

Rio Grande Bridge, 0.6 mile south and 850 feet east of, 480 feet north of drainage ditch, 160 feet southeast of levee roadway on uncultivated land, the property of Coles and Crawford; standard concrete monument with bronze tablet stamped "Boundary No. 78. Elev. 3749."

Latitude 31° 50′ 13.424″. Longitude 106° 36′ 08.851″. Elevation 3748.643.

Boundary Monument No. 79

Rio Grande Bridge, 0.9 mile south and 750 feet east of, 800 feet south of drainage canal, in cultivated field on property of Z. T. White; standard concrete monument with bronze tablet stamped "Boundary Monument No. 79. Elevation 3747."

Latitude 31° 50′ 00.792″. Longitude 106° 36′ 10.127″. Elevation 3746.632.

Boundary Monument No. 80

Rio Grande Bridge, about 1 mile south and 560 feet east of, in cultivated field on property of Z. T. White; standard concrete monument with bronze tablet stamped "Boundary Monument No. 80. Elev. 3746."

Latitude 31° 49′ 54.390″. Longitude 106° 36′ 12.315″. Elevation 3746.372.

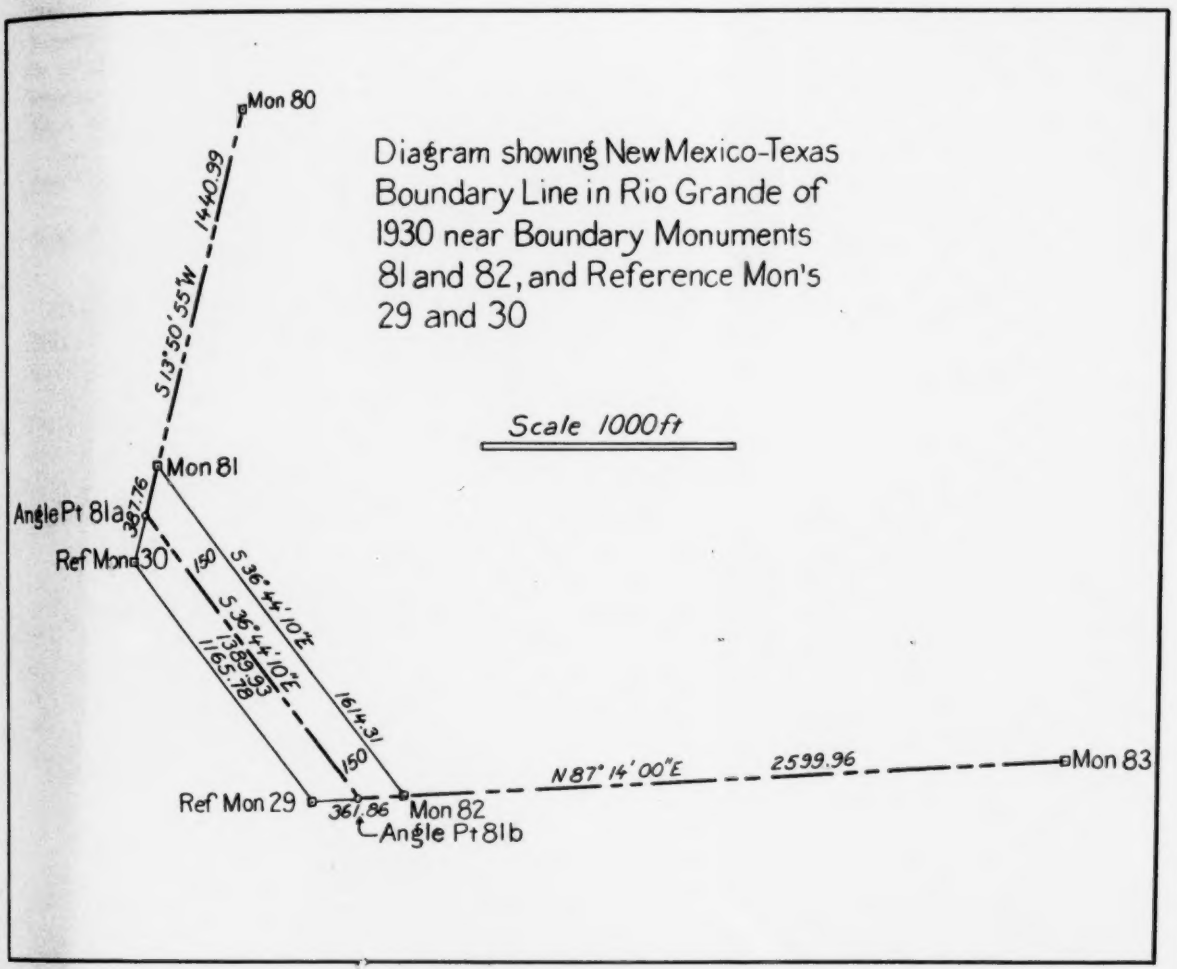


Diagram showing New Mexico-Texas Boundary Line in Rio Grande of 1930 near Boundary Monuments 81 and 82, and Reference Mon's 29 and 30
Scale 1000 ft
Mon 80
1440.99
S 13° 50' 55" W
Mon 81
Angle Pt 81a
397.76
Ref Mon 30
150
S 36° 44' 10" E
1614.31
1389.93
1165.78
150
Ref Mon 29
361.86
Mon 82
Angle Pt 81b
N 87° 14' 00" E
2599.96
Mon 83

Boundary Monument No. 81

Rio Grande Bridge, about 1.25 miles south and 200 feet east of, 115 feet westerly from levee roadway, 70 feet from present Rio Grande bank or 30 feet from highwater bank, in brush and timber; standard concrete monument with bronze tablet stamped "Boundary Monument No. 81. Elev. 3747."

Latitude 31° 49′ 40.548″. Longitude 106° 36′ 16.311″. Elevation 3746.804.

Angle Point 81a in Rio Grande of 1930 South of Monument No. 81

This position of angle point 81a in the boundary line comes in the bed of the Rio Grande of 1930, and hence no monument could be set.

This angle point is on prolongation southward of line from Monument No. 80 to Monument No. 81, true bearing S. 13° 50′ 55″ W., and is 193.85 feet distant from Monument No. 81.

Latitude 31° 49′ 38.685″. Longitude 106° 36′ 16.849″.

Reference Monument No. 30

Rio Grande Bridge, 1.3 miles south of, on west side of Rio Grande 387.8 feet from Boundary Monument No. 81 on projection of line from Monument No. 80 to Monument No. 81. It is 76 feet west of cut bank of river close to base of sand hill bluffs; standard concrete monument with bronze tablet stamped "Reference Point No. 30."

Latitude 31° 49′ 36.822″. Longitude 106° 36′ 17.387″.

Boundary Monument No. 82

Rio Grande Bridge, about 1.5 miles south and 0.2 mile east of, 100 feet west of line roadway and 90 feet east of cut bank of river, in brush and timber on land of Z. T. White; standard concrete monument with bronze tablet stamped "Boundary Monument No. 82. Elevation 3745."

Latitude 31° 49′ 27.749″. Longitude 106° 36′ 05.122″. Elevation 3745.030.

Angle Point 81b in Rio Grande of 1930 West of Monument No. 82

This position of angle point 81b in boundary line comes in bed of Rio Grande of 1930 and therefore no monument could be erected. This angle point is on prolongation westward of line from Monument 83 to Monument 82; true bearing S. 87° 14′ 00″ W. and is 180.90 ft. distant from Monument No. 82.

Latitude 31° 49′ 27.663″. Longitude 106° 36′ 07.216″.

True bearing from angle point 81a south of Monument No. 81 to angle point 81b west of Monument No. 82 is S. 36° 44′ 10″ E., distance 1,389.93 feet.

Reference Monument No. 29

Rio Grande Bridge, about 1.5 miles south and 0.15 mile east of, on west side of river, 40 feet west of cut bank and 30 feet east of base of sand hill bluffs, in brush; standard concrete monument with bronze tablet stamped "Reference Point No. 29."

Latitude 31° 49′ 27.576″. Longitude 106° 36′ 09.310″

Boundary Monument No. 83

Rio Grande Bridge, about 1.45 miles south and 0.7 mile east of, 1,000 feet south of drainage canal, in cultivated field on land of Z. T. White; standard concrete monument with bronze tablet stamped "Boundary Monument No. 83. Elev. 3743."

Latitude 31° 49′ 28.991″. Longitude 106° 35′ 35.029″. Elevation 3742.957.

Boundary Monument No. 84

Pioneer Park, 0.5 mile north and 0.5 mile west of, in cultivated field on land owned by Z. T. White; standard concrete monument with bronze tablet stamped "Boundary Monument No. 84. Elev. 3742."

Latitude 31° 49′ 25.743″. Longitude 106° 35′ 25.487″. Elevation 3741.728.

Boundary Monument No. 85

Pioneer Park, about 0.4 mile north and 0.3 mile west of, about west of Whites Spur on property of Z. T. White; standard concrete monument with bronze tablet stamped "Boundary Monument No. 85. Elev. 3742."

Latitude 31° 49′ 18.878″. Longitude 106° 35′ 13.133″. Elevation 3742.108.

Boundary Monument No. 86

Pioneer Park, 1,850 feet north and 1,240 feet west of, in field on property of Z. T. White; standard concrete monument with bronze tablet stamped "Boundary Monument No. 86. Elev. 3739".

Latitude 31° 49′ 16.857″. Longitude 106° 35′ 09.299″. Elevation 3739.239.

Boundary Monument No. 87

Pioneer Park, 1,180 feet north and 920 feet west of, on land now being cleared and graded for cultivation, on property of Z. T. White; standard concrete monument with bronze tablet stamped "Boundary Monument No. 87. Elev. 3741".

Latitude 31° 49′ 10.150″. Longitude 106° 35′ 05.579″. Elevation 3740.537.

Boundary Monument No. 88

Pioneer Park, approximately near the center of the so-called park, unimproved; standard concrete monument with bronze tablet stamped "Boundary Monument No. 88. Elev. 3740".

Latitude 31° 48′ 58.513″. Longitude 106° 34′ 54.966″. Elevation 3740.129.

NOTE.—Monument 86 was set in the bed of the former course of the Rio Grande. Since being established, grading and filling has been done which nearly or quite covers the monument.

Boundary Monument No. 89

Pioneer Park, 430 feet south and 270 feet east of, in cultivated field on property of Z. T. White; standard concrete monument with bronze tablet stamped "Boundary Monument No. 89. Elev. 3739".

Latitude 31° 48′ 54.275″. Longitude 106° 34′ 51.854″. Elevation 3739.331.

Boundary Monument No. 90

Pioneer Park, 900 feet south and 430 feet east of, east of public road leading to Pioneer Park, in cultivated field on property of R. E. Gilbert; standard concrete monument with bronze tablet stamped "Boundary Monument No. 90. Elev. 3739".

Latitude 31° 48′ 49.595″. Longitude 106° 34′ 49.949″. Elevation 3738.869.

Boundary Monument No. 91

Pioneer Park, 0.4 mile south and 1,740 feet east of, about 90 feet north of a public road which has a bearing of about S. 30°W., in cultivated field on land reported as owned by R. E. Secrest; standard concrete monument with bronze tablet stamped "Boundary Monument No. 91. Elevation 3738".

Latitude 31° 48′ 37.111″. Longitude 106° 34′ 34.807″. Elevation 3738.123.

Boundary Monument No. 92

Pioneer Park, 0.4 mile south and 0.55 mile east of, about 4,000 feet west and 900 feet south of Gibson's crossing of Santa Fe Railway, 275 feet northwest from cut bank of Rio Grande, in cultivated field on land of Henry Veck, standard concrete monument with bronze tablet stamped "Boundary Monument No. 92. Elev. 3737".

Latitude 31° 48′ 36.334″. Longitude 106° 34′ 12.833″. Elevation 3736.727.

Boundary Monument No. 93

Gibsons Crossing of Santa Fe Railway, 0.55 mile west of, in cultivated field on land of T. D. Porcher; standard concrete monument with bronze tablet stamped "Boundary Monument No. 93. Elev. 3736".

Latitude 31° 48′ 45.947″. Longitude 106° 34′ 00.044″. Elevation 3735.827.

Reference Monument No. 45 or RX

Gibson's Crossing, about 2,800 feet west and 25 feet south of, in cultivated field owned by T. D. Porcher. This is a reestablished triangulation station of the Salazar-Diaz Survey of 1852; standard concrete monument with bronze tablet stamped "Reference Monument No 45 RX. Elev. 3736".

Latitude 31° 48′ 44.870″. Longitude 106° 33′ 58.846″. Elevation 3735.929.

Boundary Monument No. 94

Gibson's Crossing, 0.5 mile west and 260 feet north of, in cultivated field on land owned by T. D. Porcher; standard concrete monument with bronze tablet stamped "Boundary Monument No. 94. Elev. 3736".

Latitude 31° 48′ 47.654″. Longitude 106° 33′ 58.085″. Elevation 3736.359.

Boundary Monument No. 95

Gibson's Crossing, 1,630 feet west of and 45 feet south of, in cultivated field on land of T. D. Porcher; standard concrete monument with bronze tablet stamped "Boundary Monument No. 95. Elev. 3736".

Latitude 31° 48′ 44.651″. Longitude 106° 33′ 45.110″. Elevation 3736.215.

Boundary Monument No. 96

Gibson's Crossing, 1,520 feet west and 540 feet south of, in cultivated field on land of M. P. Gibson; standard con-

crete monument with bronze tablet stamped "Boundary Monument No. 96. Elev. 3736". Azimuth to chimney on El Paso Power Plant is 295° 41′ 30″.

Latitude 31° 48′ 39.752″. Longitude 106° 33′ 43.873″. Elevation 3735.972.

Boundary Monument No. 97

Gibson's Crossing, 800 feet south and 115 feet west of, 590 feet southeast from M. P. Gibson's house, 15 feet west of a private road, in cultivated field on land owned by E. Gibson; standard concrete monument with bronze tablet stamped "Boundary Monument No. 97. Elev. 3735".

Latitude 31° 48′ 37.202″. Longitude 106° 33′ 27.567″. Elevation 3734.934.

Azimuth to chimney on El Paso Power Plant is 300° 53′ 30″.

Reference Monument No. 8 or Frontera

This is a reestablished triangulation station of the Salazar-Diaz Survey of 1852 and astronomic station by W. H. Emory in 1852. It is 163 feet south and 98 feet east of Gibson's Crossing of Santa Fe Railway, 32 feet southwest of center of railway track, and 1.8 feet lower than top of rail; a concrete block 20 by 20 inches square and 24 inches deep with top about 3 inches above surface of ground. A bronze tablet in top stamped "Reference Point No. 8 — Frontera. Elev. 3736".

Latitude 31° 48′ 43.494″. Longitude 106° 33′ 25.081″. Elevation 3736.103.

Boundary Monument No. 98

El Paso Power Plant, 1,530 feet distant from west chimney of, in azimuth 144° 09′ in center of paved highway, 492.5 feet northwest from crossing of spur railway track to Spear's oil mill. Bronze tablet cemented in pavement and stamped "Boundary Monument No. 98. Elev. 3731".

Latitude 31° 48′ 28.403″. Longitude 106° 32′ 56.747″. Elevation 3730.844.

Boundary Monument No. 99

El Paso Power Plant, about 1,200 feet N. 15° 19′ W. true from west chimney of, 390 feet N. 56° 07′ W. true from northwest corner of seed warehouse at Spear's Oil Mill, in brushy land; standard concrete monument with bronze tablet stamped "Boundary Monument No. 99. Elev. 3732".

Latitude 31° 48′ 27.544″. Longitude 106° 32′ 50.008″. Elevation 3732.452.

Boundary Monument No. 100

El Paso Power Plant, about 987 feet N. 40° 10′ W. true from west chimney of, 95 feet N. 59° 36′ W. true from northwest corner of seed warehouse, at Spear's Oil Mill, 8 inches northeast of rail of spur track to seed warehouse, and nearly in line with northeast line of warehouse; concrete block 17 by 17 inches square and 24 inches deep with top about 2 inches lower than top of rail; bronze tablet in top stamped "Boundary Monument No. 100. Elev. 3732".

Latitude 31° 48′ 25.846″. Longitude 106° 32′ 47.170″. Elevation 3731.907.

Reference Monument No. 9

This monument is N. 44° 47′ E. true and 40 feet distant from Boundary Monument 100. It is on property of Spears and Co.; standard concrete monument with bronze tablet stamped "Reference Point No. 9. Elev. 3733".

Latitude 31° 48′ 26.127″. Longitude 106° 32′ 46.844″. Elev. 3733.345.

Reference Monument No. 10

This monument is S. 44° 47′ W. true and 40 feet distant from Boundary Monument No. 100. It is on property of Spears and Co.; standard concrete monument with bronze tablet stamped "Reference Point No. 10. Elev. 3733."

Latitude 31° 48′ 25.565″. Longitude 106° 32′ 47.496″. Elevation 3733.244.

Boundary Monument No. 101

El Paso Power Plant, on property of, 150 feet southwest of main track of Santa Fe Ry., 90 feet from cut bank of Rio Grande, on low land; standard concrete monument with bronze tablet stamped "Boundary Monument No. 101. Elev. 3729".

Azimuth to east chimney on power plant is 63° 19′.

Latitude 31° 48′ 18.133″. Longitude 106° 32′ 40.736″. Elevation 3729.189.

Boundary Monument No. 102

On west bank of Rio Grande. S. 59° 52′ E. of northeast corner of El Paso Power Plant, 260 feet N. 6° 30′ E., true, from front door of brick schoolhouse; standard concrete monument with bronze tablet stamped "Boundary Monument No. 102. Elev. 3732".

Latitude 31° 48′ 11.728″. Longitude 106° 32′ 35.772″. Elevation 3732.224.

Boundary Monument No. 103

Courchesne bridge, 170 feet S. 32° 30′ W. from west end of, 35 feet northwest of corner of brick house, 35 feet southeast of public road; standard concrete monument with bronze tablet stamped "Boundary Monument No. 103. Elev. 3731".

Latitude 31° 48′ 07.435″. Longitude 106° 32′ 28.602″. Elevation 3730.993.

Angle Point 103-a

The position of this angle point in boundary line, designated as 103-a, falls in Rio Grande of 1930 and therefore no monument could be built. This angle point is determined from Salazar-Diaz course (4-a) S. 71° 40′ 50″ E. Mag. distance 207.0 meters (Record page 2380) true bearing S. 59° 54′ 50″ E. corrected distance 679.85 feet from Monument 103; true bearing from Reference Monument 23 is N. 32° 48′ 05″ E. distance 50.15 feet, true bearing from Refer-

ence Monument No. 11 is S. 32° 48′ 05″ W., distance 359.07 feet (surface).

Latitude 31° 48′ 04.064″. Longitude 106° 31′ 21.787″.

Angle Point 103-b

This angle point in the boundary line falls in the Rio Grande of 1930 and therefore no monument could be built. This point is determined from Salazar-Diaz course of 5-a, S. 66° 18′ 00″ E. magnetic, true course S. 54° 32′ 00″ E.; distance 479.5 meters (Record page 2380) corrected distance used 1626.63 feet from Angle Point 103-a.

True bearing from Reference Monument 12 is S. 52° 42′ 16″ W., distance 101.61 feet.

True bearing from Reference Monument 22 is N. 52° 42′ 16° E., distance 333.75 feet.

It is on the prolongation of the line from Monument 105 to Monument 104 and is 1011.80 feet N. 20° 02′ 30″ W. from Monument 104.

Latitude 31° 47′ 54.725″. Longitude 106° 32′ 06.439″.

Boundary Monument No. 104

Courchesne Bridge, 0.6 mile southeast of, on west bank of Rio Grande opposite Courchesne quarries across river, 25 feet southwest of cut bank on land owned by Jim Derrick who lives about 600 feet to the west. Standard concrete monument with bronze tablet stamped "Boundary Monument No. 104. Elev. 3731".

Latitude 31° 47′ 45.329″. Longitude 106° 32′ 02.411″. Elevation 3731.24.

Boundary Monument No. 105

Courchesne Bridge, about 0.8 miles southeast of, on west bank of river opposite Courchesne's residence, 20 feet southwest of cut bank of river, on land owned by Jim Derrick; standard concrete monument with bronze tablet stamped "Boundary Monument No. 105. Elev. 3730".

Latitude 31° 47′ 35.630″. Longitude 106° 31′ 58.269″. Elevation 3730.14.

Reference Monument No. 21

Courchesne Bridge, 0.75 mile south and 0.5 mile east of, just above prominent rocky bluff, 67 feet north of center of railway track (spur to brickyard) and 75 feet south of cut bank of river; standard concrete monument with bronze tablet stamped "Reference Point No. 21. Elev. 3734".

Latitude 31° 47′ 29.565″. Longitude 106° 31′ 56.822″. Elevation 3734.34.

Angle Point 105-a

This angle point in the boundary line falls in the Rio Grande of 1930 and therefore no monument could be built to mark it. This point is on the prolongation of the Salazar-Diaz course 5-b, S. 31° 47′ 30″ E. Magnetic, or S. 20° 02′ 30″ E., true, of which monuments 104 and 105 form a part and is 549.10 feet S. 20° 02′ 30″ E. from Monument 105. This angle point is near the western (upper) end or beginning of the Canyon and from this point the course of the boundary line through the Canyon was selected in accordance with the recommendations of the Special Master in Section V (1) of his report (see page 5 of this report). It is S. 33° 03′ 45″ W. 291.57 feet distant from Reference Monument 13 and N. 33° 03′ 45″ E. 116.02 feet from Reference Monument 21.

Latitude 31° 47′ 30.526″. Longitude 106° 31′ 56.089″.

Angle Point 105-b

This angle point in the boundary line falls in the Rio Grande of 1930 and therefore no monument could be built to mark it. This point is near the middle of the narrowest part of the Canyon of 1850-1852 and of 1913 (the date the suit was filed) and is N. 86° 15′ 12″ E., 615.31 feet from angle point 105-a. It is also N. 6° 09′ 50″ E., 119.20 feet from Reference Monument 20 and S. 6° 09′ 50″ W., 119.20 feet from Reference Monument 14.

Latitude 31° 47′ 30.914″. Longitude 106° 31′ 48.988″.

Angle Point 105-c

This angle point in the boundary line falls in the Rio Grande of 1930 and therefore no monument could be built to mark it. This point is near the lower end of the Canyon of 1850 and of 1913 and is N. 28° 42′ 05″ W., 519.98 feet distant from Monument 106. It is also S. 63° 27′ 35″ E., 1,004.65 feet distant from Angle Point 105-b, and N. 43° 19′ 01″ E., 150.02 feet from Reference Monument 19 and S. 43° 19′ 01″ W. 264.13 feet from Reference Monument 15.

Latitude 31° 47′ 26.483″. Longitude 106° 31′ 38.565″.

Boundary Monument No. 106

On west bank of river opposite El Toro Cement Company's plant, 211 feet N. 5° 45′ E. true from end of pier of Southern Pacific Railway Company's bridge, second pier from west end and 190 feet N. 59° 20′ E. true, from end of pier, first pier from west end, 22 feet from cut bank of river, on land probably overflowed by highwater; standard concrete monument with bronze tablet stamped "Boundary Monument 106. Elev. 3727".

Latitude 31° 47′ 21.970″. Longitude 100° 31′ 35.672″. Elevation 3727.30.

South Terminal Point 106-a

This point falls in the Rio Grande of 1930, 483.39 feet due east from International Boundary Monument No. 1 and 152.41 feet due west of Reference Monument 17. It is S. 9° 09′ 10″ W., 2,084.16 feet distant from State Boundary Monument 106, which is located near the southern end of Canyon. This course is that given for Salazar-Diaz course 7-a for Section RX to RIX; namely S. 2° 36′ 50″ E., magnetic or S. 9° 09′ 10″ W. true, (Record page 2380) and was adopted in order to conform to statement of Special Master, Section V (1); page 5 this report. "The location of the west bank and of the course of the river, in 1852, from the southern end of the Canyon to the International Boundary

Line, viz., to the parallel of 31 degree 47 minutes north latitude, I find was that shown by the Salazar-Diaz Survey."

Latitude 31° 47′ 01.608″. Longitude 106° 31′ 39.511″.

Reference Monument No. 1, El Paso County, Texas

La Tuna, Texas, about 205 feet north and 436 feet east of main crossroads at, 35 feet south of actual New Mexico-Texas State line, 4 feet south of an adobe house; concrete monument in galvanized metal form 17 inches in diameter at top and standing 18 inches high. This monument marks astronomic station of Arthur D. Kidder of 1903. A bronze tablet of the New Mexico-Texas Boundary Commission of 1928 was cemented in the top and stamped "Reference Point No. 1. Elev. 3804".

Latitude 32° 00′ 01.972″. Longitude 106° 36′ 14.465″. Elevation 3804.204.

Reference Monument No. 2, El Paso County, Texas

La Tuna, Texas, 1.5 miles south of, Vinton, 1.7 miles north of, 26 feet west of center of highway, 53 feet east of center of Santa Fe Railway track, 3 feet east of right-of-way fence; standard concrete monument with bronze tablet stamped "Reference Point No. 2. Elev. 3786".

Latitude 31° 58′ 27.384″. Longitude 106° 36′ 14.794″. Elevation 3785.724.

Reference Monument No. 3, El Paso County, Texas.

Vinton station, 360 feet north of, 63 feet east of main track of Santa Fe Railway, 65 feet west of main paved highway; standard concrete monument with bronze tablet stamped "Reference Point No. 3. Elev. 3788".

Latitude 31° 57′ 04.767″. Longitude 106° 36′ 09.786″. Elevation 3787.795.

Reference Monument No. 4, El Paso County, Texas

Canutillo, 235 feet north of station, 50 feet west of center of main track of Santa Fe Railway, 50 feet east of bank of

BRONZE TABLET IMBEDDED IN TOP OF EACH REFERENCE POINT MONUMENT

THE SUPREME COURT OF THE UNITED STATES
BOUNDARY COMMISSION 1928
PENALTY FOR DISTURBING
NUMBER
REFERENCE POINT
NEW MEXICO AND TEXAS

Rio Grande, 2½ feet north of fence corner of Mr. Barnett's yard; standard concrete monument with bronze tablet stamped "Reference Point No. 4. Elev. 3769".

Latitude 31° 54′ 46.366″. Longitude 106° 36′ 02.989″. Elevation 3768.813.

Reference Monument No. 5, El Paso County, Texas

Montoya, or Borderland Road, 165 feet west of crossroads at, 45 feet west of center of Santa Fe Railway track and 45 feet south of Borderland Highway close to a fence corner; standard concrete monument with bronze tablet stamped "Reference Point No. 5. Elev. 3764".

Latitude 31° 53′ 08.445″. Longitude 106° 35′ 48.927″. Elevation 3763.611.

Reference Monument No. 6, El Paso County, Texas

Borderland Road, 1.35 miles south of, 240 feet north of switch stand at south end of siding, 53 feet east of center of Santa Fe Railway track, 34 feet west of center of paved highway, and 3 feet east of right-of-way fence; standard concrete monument with bronze tablet stamped "Reference Point No. 6. Elev. 3758".

Latitude 31° 51′ 56.454″. Longitude 106° 35′ 19.802″. Elevation 3758.181.

To triangulation station	True course	Surface distance, feet
I	S. 13° 45′ W.	22545.4
J	S. 53° 27′ W.	22179.8
L	N. 80° 45′ W.	27465.7
Canutillo	N. 53° 33′ 30″ W.	36380.9
North Franklin	N. 65° 32′ E.	32652.6
Muleros	S. 25° 16′ 45″ E.	31606.2

Reference Monument No. 7, El Paso County, Texas

Whites Spur, Santa Fe Railway, 300 feet north of switch-stand at south end of, 40 feet east of center of main track, 35 feet west of center of paved road, S. 15° 30′ W. true from

southwest corner of brick public school building; standard concrete monument with bronze tablet stamped "Reference Point No. 7. Elev. 3751".

Latitude 31° 50′ 10.788″. Longitude 106° 34′ 36.299″. Elevation 3751.367.

Reference Monument No. 8 or Frontera, El Paso County, Texas

This is a reestablished triangulation station of the Salazar-Diaz Survey of 1852 and astronomic station by W. H. Emory in 1852. It is 163 feet south and 98 feet east of Gibson's Crossing of Santa Fe Railway, 32 feet southwest of center of railway track, and 1.8 feet lower than top of rail; a concrete block 20 by 20 inches square and 24 inches deep with top about 3 inches above surface of ground. A bronze tablet in top stamped "Reference Point No. 8—Frontera. Elev. 3736".

Latitude 31° 48′ 43.494″. Longitude 106° 33′ 25.081″. Elevation 3736.103.

Reference Monument No. 9, El Paso County, Texas

This monument is N. 44° 47′ E. and 40 feet distant from Boundary Monument 100. It is on property of Spears and Co.; standard concrete monument with bronze tablet stamped "Reference Point No. 9. Elev. 3733".

Latitude 31° 48′ 26.127″. Longitude 106° 32′ 46.844″. Elevation 3733.345.

Reference Monument No. 10, Dona Ana County, N. Mex.

This monument is S. 44° 47′ W. and 40 feet distant from Boundary Monument No. 100. It is on property of Spears and Co.; standard concrete monument with bronze tablet stamped "Reference Point No. 10. Elev. 3733".

Latitude 31° 48′ 25.565″. Longitude 106° 32′ 47.496″. Elevation 3733.244.

Reference Monument No. 11, El Paso County, Texas

Courchesne Bridge, 600 feet southeast of northeast end of, 340 feet south of southeast corner of two-story brick pub-

lic school building, 64 feet north from cut bank of river on line with angle point 103-a in Rio Grande and with Reference Monument No. 23 across the river; standard concrete monument with bronze tablet stamped "Reference Point No. 11. Elev. 3730".

Latitude 31° 48′ 07.050″. Longitude 106° 32′ 19.533″. Elevation 3730.01.

	True course	Surface distance, feet
To Ref. Mon. 12	S. 45° 40′ E.	1693.67
To Ref. Mon. 23	S. 32° 48′ W.	409.22

Reference Monument No. 12, El Paso County, Texas

Courchesne Bridge, 1,400 feet south and 1,900 feet east of, on east side of river, 88 feet southwest from center of main paved highway and 45 feet northeast from cut bank of river on line with angle point 103-b in Rio Grande and with Reference Monument No. 22 across river; standard concrete monument with bronze tablet stamped "Reference Point No. 12. Elev. 3731."

Latitude 31° 47′ 55.343″. Longitude 106° 32′ 05.493″. Elevation 3731.36.

	True course	Surface distance, feet
To Ref. Mon. 22	S. 52° 42′ W.	435.36
To Ref. Mon. 23	N. 59° 39′ W.	1,660.89

Reference Monument No. 13, El Paso County, Texas

A. Courchesne's residence, about 600 feet south of, east side of Rio Grande, 10 feet west of west corner of stable corral, 57 feet from nearest point of cut bank and 73 feet back from cut bank on line with angle point 103-a in Rio Grande and with Reference Monument No. 21 across the river; standard concrete monument with bronze tablet stamped "Reference Point No. 13. Elev. 3732."

Latitude 31° 47′ 32.944″. Longitude 106° 31′ 54.246″. Elevation 3732.35.

	True course	Surface distance, feet
To Ref. Mon. 21	S. 33° 04′ W.	407.59

Reference Monument No. 14, El Paso County, Texas

Southwestern Portland Cement Company's plant, about 1,500 feet northwest from, inside stable corral of the company, 160 feet south of center of Santa Fe Railway track and 15 feet north of cut bank of river; standard concrete monument with bronze tablet stamped "Reference Point No. 14. Elev. 3731."

Latitude 31° 47′ 32.098″. Longitude 106° 31′ 48.828″. Elevation 3731.29.

	True course	Surface distance, feet
To Ref. Mon. 15	S. 70° 38′ E.	1,131.21
To Ref. Mon. 19	S. 49° 10′ E.	1,034.80
To Ref. Mon. 20	S. 6° 10′ W.	238.40
To Ref. Mon. 21	S. 69° 39′ W.	736.10

Reference Monument No. 15, El Paso County, Texas

Southwestern Portland Cement Company's plant, about 50 feet south of rock unloading platform into elevators, 62 feet north from center of Santa Fe Railway track and 125 feet from cut bank of river on line with angle point 105-c in Rio Grande and with Reference Monument 19 across the river; standard concrete monument with bronze tablet stamped "Reference Point No. 15. Elev. 3735."

Latitude 31° 47′ 28.385″. Longitude 106° 31′ 36.466″. Elevation 3734.80.

	True course	Surface distance, feet
To Ref. Mon. 19	S. 43° 19′ W.	414.15
To Ref. Mon. 20	N. 82° 47′ 30″ W.	1,101.41

Reference Monument No. 16, El Paso County, Texas

On east side of Rio Grande, opposite plant of Southwestern Portland Cement Company. It is 300 feet north of second pier from west end of Southern Pacific Railway bridge and just across river from Boundary Monument No. 106. It is in rear of alley driveway at back of yard

and residence belonging to cement company, inside chicken yard and 23 feet from cut bank of river; standard concrete monument with bronze tablet stamped "Reference Point No. 16. Elev. 3734."

Latitude 31° 47′ 22.272″. Longitude 106° 31′ 33.813." Elevation 3733.65.

	True course	Surface distance, feet
To Ref. Mon. 17	S. 9° 14′ W.	2,115.55
To Ref. Mon. 18	S. 79° 13′ W.	339.61
To Ref. Mon. 19	N. 58° 20′ 45″ W.	602.86

Reference Monument No. 17, El Paso County, Texas

On east bank of Rio Grande opposite American Smelting and Refining Company's smelter, on extension eastward of International Boundary line, 635.80 feet due east of International Boundary Monument No. 1, 43 feet east from edge of water, no cut bank, concrete base 30 by 30 inches square and 27 inches deep, surmounted by concrete monument encased in galvanized iron, standing 30 inches above base and 13 inches in diameter at the top. Bronze tablet in top stamped "Reference Point No. 17. Elev. 3726."

Latitude 31° 47′ 01.608″. Longitude 106° 31′ 37.746″. Elevation 3726.40.

	True course	Surface distance, feet
To International Boundary Monument 1	S. 90° 00′ W.	635.80
New Mexico-Texas Boundary Monument 106	N. 4° 58′ 30″ E.	2,065.42
Reference Monument 16	N. 9° 14′ E.	2,115.55

Reference Monument No. 18, Dona Ana County, N. Mex.

On west side of Rio Grande, 64.5 feet northwest of north end of west pier of upper Southern Pacific Railway bridge, 10 feet west of roadway 176.17 feet from Boundary Monument No. 106, in line with Reference Monument No. 16

across river; standard concrete monument with bronze tablet stamped "Reference Point No. 18, Elev. 3729."

Latitude 31° 47′ 21.644″. Longitude 106° 31′ 37.677″. Elevation 3729.15.

	True course	Surface distance, feet
To Reference Monument 16...	N. 79° 13′ E.	339.61
To Boundary Monument 106..	N. 79° 13′ E.	176.20

Reference Monument No. 19, Dona Ana County, N. Mex.

On southwest side of Rio Grande opposite Southwestern Portland Cement Company's plant, 105 feet south of cut bank of river and 42 feet north of center of roadway; standard concrete monument with bronze tablet stamped "Reference Point No. 19. Elevation 3730."

Latitude 31° 47′ 25.403″. Longitude 106° 31′ 39.757″. Elevation 3730.33.

	True course	Surface distance, feet
To Reference Monument No. 20.....	N. 61° 28′ 15″ W.	920.37

Reference Monument No. 20, Dona Ana County, N. Mex.

Courchesne Bridge, 0.75 mile south and 0.6 mile east of, opposite quarries of Southwestern Portland Cement Company, on south side of river at rock bluff 80 feet high at point originally known as the Canyon. It is directly opposite stable and corral of the cement Company, 56 feet north of center of spur railway track at slope of waste bank from railway cut, 17 feet south from cut bank of river; standard concrete monument with bronze tablet stamped "Reference Point No. 20. Elev. 3,729."

Latitude 31° 47′ 29.753″. Longitude 106° 31′ 49.124″. Elevation 3,728.90.

	True course	Surface distance, feet
To Reference Monument 21...	S. 88° 22′ W.	664.67

Reference Monument No. 21, Dona Ana County, N. Mex.

Courchesne Bridge, 0.75 mile south and 0.5 mile east of, just above prominent rocky bluff, 67 feet north of center of railway track (spur to brickyard) and 75 feet south of cut bank of river; standard concrete monument with bronze tablet stamped "Reference Point No. 21. Elev. 3734."

Latitude 31° 47′ 29.565″. Longitude 106° 31′ 56.822″. Elevation 3,734.34.

	True course	Surface distance, feet
To Reference Monument No. 20	N. 88° 22′ E.	664.67

Reference Monument No. 22, Dona Ana County, N. Mex.

Courchesne Bridge, 0.4 mile southeast of, on west bank of Rio Grande, 20 feet southwest of cut bank of river and 150 feet southeast of home of H. A. Kezer who owns the land; standard concrete monument with bronze tablet stamped "Reference Point No. 22. Elev. 3732."

Latitude 31° 47′ 52.733″. Longitude 106° 32′ 09.505″. Elevation 3731.74.

	True course	Surface distance, feet
To Boundary Monument 104	S. 39° 17′ 25″ E.	966.86
To Reference Monument 12	N. 52° 42′ 16″ E.	435.36

Reference Monument No. 23, Dona Ana County, N. Mex.

Courchesne Bridge, about 680 feet southeast of, 115 feet northeast of roadway, 30 feet southwest of cut bank of river, in cultivated field on land owned by H. A. Kezer; standard concrete monument with bronze tablet stamped "Reference Point No. 23. Elev. 3731."

Latitude 31° 48′ 03.648″. Longitude 106° 32′ 22.099″. Elevation 3731.37.

	True course	Surface distance, feet
To Boundary Monument 103	N. 55° 41′ 55″ W.	679.13

Reference Monument No. 24, El Paso County, Texas

Courchesne Bridge, 61 feet west of southwest end of, 90 feet west of bank of Rio Grande 5 feet southwest of a corner fence post and 1 foot southeast of fence line; standard concrete monument with bronze tablet stamped "Reference Point No. 24. Elev. 3732".

Latitude 31° 48′ 08.863″. Longitude 106° 32′ 28.320″. Elevation 3732.307.

	True course	Surface distance, feet
To Boundary Monument 103	S. 9° 34′ W.	146.40
To Muleros	S. 13° 11′ 30″	5,732.0
To International Boundary Monument No. 3	S. 61° 39′ W.	14,309.6
To North Franklin	N. 22° 14′ 45″ E.	39,451.4

Reference Monument No. 25, Dona Ana County, N. Mex.

Courchesne Bridge, about 0.9 mile west and 0.4 mile south of, at farmhouse of T. W. Osinga, on a sandy knoll 75 feet south of road and 175 feet east of driveway to house; standard concrete monument, with bronze tablet stamped "Reference Point No. 25. Elev. 3752".

Latitude 31° 47′ 49.049″. Longitude 106° 33′ 20.939″. Elevation 3752.478.

	True course	Surface distance, feet
To International Boundary Monument No. 3	S. 59° 14′ W.	9,370.2
To I	N. 78° 44′ 30″ W.	15,924.9
To Reference Monument 26	N. 75° 46′ W.	8,556.
To Frontera	N. 3° 43′ 15″ W.	5,514.2
To North Franklin	N. 26° 49′ E.	43,162.6

Reference Monument No. 26, Dona Ana County, N. Mex.

Courchesne Bridge, 2.45 miles west of, 600 feet west of Rio Grande on a sandy knoll, 100 feet east of a roadway;

standard concrete monument with bronze tablet stamped "Reference Point No. 26. Elev. 3785".

Latitude 31° 48′ 09.870″. Longitude 106° 34′ 57.029″. Elevation 3784.649.

	True course	Surface distance, feet
To I	N. 82° 13′ W.	7,394.2
To RX	N. 54° 50′ 45″ E.	6,143.0
To Muleros	S. 63° 46′ 15″ E.	12,853.9

Reference Monument No. 27, Dona Ana County, N. Mex.

Courchesne Bridge, 2.7 miles west and 0.75 mile north of, at west edge of Rio Grande just where an outcrop of granite rock juts into the river about opposite Pioneer Park east of river, in crevice of jagged rock set in concrete; bronze tablet stamped "Reference Point No. 27. Elev. 3741".

Latitude 31° 48′ 47.826″. Longitude 106° 35′ 13.370″. Elevation 3740.824.

Reference Monument No. 28, Dona Ana County, N. Mex.

Courchesne Bridge, 3.6 miles west and 1.45 miles north of, on sand hill bluffs just west of river near place where boundary line falls in the river, 50 to 60 feet above river; standard concrete monument with bronze tablet stamped "Reference Point No. 28. Elev. 3794".

Latitude 31° 49′ 24.442″. Longitude 106° 36′ 10.243″. Elevation 3793.966.

	True course	Surface distance, feet
To Station I	S. 8° 44′ 30″ W.	6,613.2
To Station J	N. 80° 55′ W.	13,636.6
To North Franklin	N. 49° 42′ 15″ E.	44,670.6
To Station Muleros	S. 53° 29′ 30″ E.	22,210.4

Reference Monument No. 29, Dona Ana County, N. Mex.

Rio Grande Bridge, about 1.5 miles south and 0.15 mile east of, on west side of river, 40 feet west of cut bank and 30 feet east of base of sand hill bluffs, in brush; standard

concrete monument with bronze tablet stamped "Reference Point No. 29".

Latitude 31° 49′ 27.576″. Longitude 106° 36′ 09.310″.

	True course	Surface distance, feet
To Reference Monument 30	N. 36° 44′ 10″ W.	1,165.8
To Boundary Monument 82	N. 87° 14′ 00″ E.	361.86

Reference Monument No. 30, Dona Ana County, N. Mex.

Rio Grande Bridge, 1.3 miles south of, on west side of Rio Grande 387.76 feet from Boundary Monument No. 81 on projection of line from Monument No. 80 to Monument No. 81. It is 76 feet west of cut bank of river close to base of sand hill bluffs; standard concrete monument with bronze tablet stamped "Reference Point No. 30".

Latitude 31° 49′ 36.822″. Longitude 106° 36′ 17.387″.

Reference Monument No. 31, Dona Ana County, N. Mex.

Rio Grande Highway bridge west of Country Club, 0.4 mile west and 0.4 mile south of, 2,430 feet south and 1,120 feet east of triangulation station RXI, near base of foothills on west side of valley, 300 feet west of drainage canal; standard concrete monument with bronze tablet stamped "Reference Point No. 31. Elev. 3758".

Latitude 31° 50′ 25.200″. Longitude 106° 36′ 42.453″. Elevation 3757.865.

	True course	Surface distance, feet
To Station J	S. 69° 32′ W.	11,406.2
To Station RXI	N. 24° 43′ 30″ W.	2,675.9
To Station Muleros	S. 46° 50′ E.	28,288.0
To Station I	S. 7° 58′ 30″ E.	12,800.6

Reference Monument No. 32, El Paso County, Texas

Rio Grande Bridge, 820 feet north and 3,330 feet west of, 50 feet northeast of the true boundary line which comes in drainage ditch; the line between Reference Monuments

Nos. 32 and 33 being parallel to and 50 feet northeast of the true boundary line; standard concrete monument with bronze tablet stamped "Reference Point No. 32. Elev. 3751".

Latitude 31° 50′ 54.197″. Longitude 106° 36′ 57.348″. Elevation 3750.830.

Reference Monument No. 33, El Paso County, Texas

Rio Grande Bridge, 2,170 feet north and 4,640 feet west of, 50 feet northeast of true boundary line which comes in drainage ditch, on land of J. C. White; standard concrete monument with bronze tablet stamped "Reference Point No. 33. Elev. 3751."

Latitude 31° 51′ 07.503″. Longitude 106° 37′ 12.579″. Elevation 3751.326.

Reference Monument No. 34, Dona Ana County, N. Mex.

Borderland Gin, 1.75 miles south and 0.45 mile west of, on top of waste bank on west side of drainage canal, 20 feet south of line of bridge across canal; standard concrete monument with bronze tablet stamped "Reference Point No. 34. Elev. 3762."

Azimuth to Muleros triangulation station is 315° 29′.

Latitude 31° 51′ 39.442″. Longitude 106° 37′ 49.958″. Elevation 3762.187.

Reference Monument No. 35, El Paso County, Texas

Montoya, 1.65 miles west of, 600 feet west of Borderland Cotton Gin, 50 feet east of crossroads, 15 feet east of irrigating canal, 20 feet north of east-west road; standard concrete monument with bronze tablet stamped "Reference Point No. 35. Elev. 3762."

Latitude 31° 53′ 08.895″. Longitude 106° 37′ 29.906″. Elevation 3761.670.

Reference Monument No. 36, Dona Ana County, N. Mex.

Borderland Gin, 1.25 miles west of, 800 feet east of bluff at west side of valley, 50 feet west of irrigating canal, 20

feet south of highway and 20 feet north of gate at entrance to Henry R. Goggin's farm, 2 feet from telephone pole; standard concrete monument with bronze tablet stamped "Reference Point No. 36. Elev. 3765."

Latitude 31° 53′ 08.315″. Longitude 106° 38′ 39.412″. Elevation 3765.376.

	True course	Surface distance, feet
To Station J	S. 1° 39′ 30″ W.	20484.3
To Station L	S. 73° 53′ 00″ W.	10062.4
To Station Canutillo	N. 40° 04′ 30″ W.	18735.6

Reference Monument No. 37, Dona Ana County, N. Mex.

La Union crossroads, 3.4 miles south and 0.4 mile east of, 200 feet north of east-west road, 25 feet above level of valley land, on a sandy knoll; standard concrete monument with bronze tablet stamped "Reference Point No. 37. Elev. 3798."

Latitude 31° 54′ 04.900″. Longitude 106° 39′ 13.955″. Elevation 3798.213.

	True course	Surface distance, feet
To Station L	S. 38° 51′ 30″ W.	11016.0
To Station Canutillo	N. 46° 30′ 45″ W.	12520.0

Reference Monument No. 38, Dona Ana County, N. Mex.

La Union crossroads, 2 miles nearly due south of, 700 feet south of an adobe house with elevated water tank in rear, 300 feet northwest of an adobe house, just east of a dim roadway; standard concrete monument with bronze tablet stamped "Reference Point No. 38. Elev. 3788."

Azimuth to Canutillo triangulation station is 97° 29′.

Latitude 31° 55′ 20.878″. Longitude 106° 39′ 36.487″. Elevation 3787.962.

Reference Monument No. 39, Dona Ana County, N. Mex.

La Union crossroads, 445 feet south and 14 feet east of, 150 feet west of road on bank, 20 feet higher than road,

150 feet north of northeast corner of adobe house of Eusebio Tellez, 4 feet southeast of corner fence post; standard concrete monument with bronze tablet stamped "Reference Point No. 39. Elev. 3798."

Latitude 31° 56′ 58.176″. Longitude 106° 39′ 38.547″. Elevation 3798.935.

	True course	Surface distance, feet
To Station Canutillo	S. 38° 02′ 50″ W.	11298.0
To Station T	S. 66° 31′ 30″ W.	9568.6
To Station North Franklin	S. 71° 57′ 30″ E.	54720.0

Reference Monument No. 40, Dona Ana County, N. Mex.

La Union crossroads, 2.05 miles north and 0.6 mile west of, on a point of land running out from the foothills and about 10 feet higher than level of bottom lands; standard concrete monument with bronze tablet stamped "Reference Point No. 40. Elev. 3800."

Latitude 31° 58′ 49.519″. Longitude 106° 40′ 14.363″. Elevation 3799.780.

Reference Monument No. 41, Dona Ana County, N. Mex.

Anthony, N. Mex., 3 miles west of, at Valley High School, directly in front of and 130 feet distant from main entrance, on bank of irrigating canal; standard concrete monument with bronze tablet stamped "Reference Point No. 41. Elev. 3799."

Latitude 31° 59′ 50.484″. Longitude 106° 39′ 16.618″. Elevation 3798.943.

Reference Monument No. 42 is RXIII, Dona Ana County, N. Mex.

This is a reestablished triangulation station of the Salazar-Diaz Survey of 1852. It is approximately 2.0 miles west and 1.0 mile south of Anthony, N. Mex., about 640 feet north of an east-west road and nearly north from a bridge crossing irrigating canal.

Standard concrete monument with bronze tablet stamped "RXIII Reference Monument No. 42. Elev. 3791."

Latitude 31° 59′ 13.000″. Longitude 106° 38′ 20.430″. Elevation 3790.714.

Reference Monument No. 43 is RXII, Dona Ana County, N. Mex.

This is a reestablished triangulation station of the Salazar-Diaz Survey of 1852. It is 0.6 mile north of Borderland road, 2,200 feet west of north-south road, in cultivated field on land owned by J. N. Duke, from L. M. Crawford Survey; standard concrete monument with bronze tablet stamped "Reference Monument No. 43 RXII. Elev. 3767."

Latitude 31° 53′ 41.420″. Longitude 106° 38′ 45.446″. Elevation 3767.314.

Reference Monument No. 44 is RXI, Dona Ana County, N. Mex.

Rio Grande Bridge, 320 feet north and 3160 feet west of, 160 feet north of highway and 390 feet west of bridge across drainage ditch, in cultivated field on land of S. N. Russell; standard concrete monument with bronze tablet stamped "Reference Monument No. 44 RXI. Elev. 3750."

This is a re-establishment of triangulation station of the Salazar-Diaz Survey of 1852.

Latitude 31° 50′ 49.252″. Longitude 106° 36′ 55.420″. Elevation 3749.527.

Reference Monument No. 45 is RX, Dona Ana County, N. Mex.

Gibson's Crossing, about 2,800 feet west and 25 feet south of, in cultivated field owned by T. D. Porcher. This is a reestablished triangulation station of the Salazar-Diaz Survey of 1852; standard concrete monument with bronze tablet stamped "Reference Monument No. 45 RX. Elev. 3736."

Latitude 31° 48′ 44.870″. Longitude 106° 33′ 58.846″. Elevation 3735.929.

REESTABLISHMENT OF SALAZAR-DIAZ RIVER TRAVERSE OF 1852 FROM FRONTERA ASTRONOMIC AND TRIANGULATION STATION UP WEST BANK OF RIO GRANDE TO TRIANGULATION STATION RXIII

From Frontera to RX

Station to Station	Magnetic Course	True Azimuth after applying correction of 11° 46′	Distance		Adjusted True Azimuth	Adjusted Distance, Feet
			Meters	Feet		
Frontera to 1.	S. 7° 15′ W.	19° 01′	250.5	821.85	18° 41′ 45″	822.18
1-2.....	S. 88 25 W.	100 11	467.5	1,533.79	100 19 12	1,510.15
2-3.....	N. 24 00 W.	167 46	157.5	516.73	167 55 40	515.22
3-4.....	N. 86 48 W.	104 58	303.5	995.73	105 09 45	980.85
4-RX.....	S. 33 05 W.	44 51	48.5	159.12	44 19 42	158.05

The positions of Frontera and RX as determined by triangulation being considered correct, a computation of latitudes and departures by the Salazar-Diaz courses and distances results in a closure 4.45 feet too far north and 46.89 feet too far west. A proportionate correction for each latitude and departure gives azimuths and distances as shown under "Adjusted."

RX to RXI Salazar-Diaz Survey

Station to Station	Magnetic Course	True Azimuth 11° 46′ Cor.	Distance Meters	Distance Feet	Adjusted. True Azimuth	Adjusted. Distance, Feet
					° ′ ″	
RX—1	S. 37° 47′ W.	49° 33′	472.0	1548.55	48 39 06	1536.28
1— 2	S. 80 35 W.	92 21	627.5	2058.72	92 22 30	2015.17
2— 3	N. 58 08 W.	133 38	591.5	1940.61	133 55 53	1909.74
3— 4	N. 30 54 W.	160 52	160.5	526.57	161 02 24	520.55
4— 5	N. 44 07 W.	147 39	148.5	487.20	147 55 35	480.78
5— 6	N. 50 00 W.	141 46	464.0	1522.31	142 04 37	1499.76
6— 7	N. 37 21 W.	154 25	223.0	731.63	154 40 09	722.46
7— 8	N. 70 22 W.	121 24	107.5	352.69	121 41 21	346.10
8— 9	N. 69 00 W.	122 46	391.0	1282.81	123 03 33	1259.26
9—10	N. 80 15 W.	111 31	261.0	856.30	111 44 18	839.06
10—11	S. 75 36 W.	87 22	881.0	2890.41	87 14 30	2827.78
11—12	N. 48 50 W.	142 56	477.0	1564.96	143 13 36	1542.20
12—13	N. 1 44 E.	193 30	525.5	1724.08	193 54 00	1709.21
13—14	N. 4 00 E.	195 46	203.5	667.65	196 14 00	662.20
14—15	N. 7 02 W.	184 44	399.5	1310.69	184 54 00	1297.31
15—16	N. 16 03 E.	207 49	299.0	980.97	208 34 45	977.75
16—17	N. 13 53 W.	177 53	501.5	1645.34	177 54 43	1628.04
17—18	N. 73 09 W.	118 37	311.5	1021.98	118 53 00	1002.26
18—19	N. 88 56 W.	102 50	384.0	1259.84	102 56 07	1232.96
19—20	S. 75 50 W.	87 36	529.5	1737.20	87 34 00	1699.50
20-RXI	N. 63 05 W.	128 41	200.0	656.17	129 00 10	644.73

The positions of RX and RXI as determined by triangulation being considered as correct a computation of latitudes and departures by the Salazar-Diaz courses and distances results in a closure of 165.5 feet too far north and 383.6 feet too far west. A proportionate correction to each latitude and departure gives azimuths and distances as shown under "Adjusted."

RXI to RXII Salazar-Diaz Survey

Station to Station	Magnetic Course	True Azimuth	Distance Meters	Distance Feet	Adjusted. True Azimuth	Adjusted. Distance, Feet
					° ′ ″	
RXI—1	N. 52° 05′ W.	139° 45′	142.0	465.88	139 15 05	479.70
1— 2	N. 55 41 W.	136 09	554.0	1817.58	135 39 20	1873.85
2— 3	N. 56 53 W.	134 57	123.5	405.18	134 27 10	417.90
3— 4	N. 53 48 W.	138 02	484.0	1587.92	137 32 30	1636.10
4— 5	N. 35 09 W.	156 41	505.0	1656.82	156 19 15	1698.50
5— 6	N. 45 16 W.	146 34	117.0	383.86	146 06 20	394.55
6— 7	N. 67 19 W.	124 31	428.5	1405.84	124 03 20	1454.35
7— 8	N. 60 37 W.	131 13	454.0	1489.50	130 43 30	1537.90
8— 9	N. 16 44 W.	175 06	379.0	1243.44	175 00 52	1271.40
9—10	N. 2 43 E.	194 33	495.0	1624.01	193 41 37	1654.10
10—11	N. 23 27 E.	215 17	584.0	1916.01	213 35 45	1919.65
11—12	N. 13 17 E.	205 07	356.0	1167.98	203 45 15	1181.27
12—13	N. 1 41 W.	190 09	222.5	729.98	189 32 25	744.92
13—14	N. 35 14 W.	156 36	292.0	958.00	156 14 10	982.12
14—15	N. 56 35 W.	135 15	374.0	1227.03	134 45 12	1265.40
15—16	N. 61 41 W.	130 09	330.0	1082.68	129 39 40	1118.15
16—17	N. 71 40 W.	120 10	269.0	882.54	119 44 15	914.09
17—18	N. 85 02 W.	106 48	214.0	702.10	106 31 40	729.30
18—19	S. 88 09 W.	99 59	160.0	524.93	99 49 00	545.76
19—RXII	N. 56 14 W.	135 36	397.0	1302.50	135 06 15	1343.08

The positions of RXI and RXII as determined by triangulation, being considered as correct, a computation of latitudes and departures by the Salazar-Diaz courses and distances results in a closure 380.45 feet too far south and 532.27 feet too far east. A proportionate correction to each latitude and departure gives azimuths and distances as shown under "Adjusted."

RXII to RXIII Salazar-Diaz Survey

Station to Station	Magnetic Course	True Azimuth 11° 46′ Cor.	Distance Meters	Distance Feet	Adjusted. True Azimuth ° ′ ″	Adjusted. Distance, Feet
RXII—1	N. 9° 25′ W.	182° 21′	415.5	1363.19	182 24 25	1330.86
1— 2	N. 16 47 E.	208 33	495.0	1624.01	209 08 00	1594.36
2— 3	N. 27 33 E.	219 19	438.5	1438.64	219 59 43	1418.33
3— 4	N. 39 15 E.	231 01	365.0	1197.50	231 41 25	1186.38
4— 5	N. 38 53 E.	230 39	492.5	1615.81	231 19 32	1600.58
5— 6	N. 59 35 E.	251 21	543.0	1781.49	251 45 54	1777.33
6— 7	N. 48 51 E.	240 37	424.5	1392.72	241 12 12	1384.92
7— 8	N. 33 07 E.	224 53	738.0	2421.26	225 34 26	2392.67
8— 9	N. 86 45 E.	278 31	297.5	976.05	278 42 57	976.64
9—10	N. 25 18 E.	217 04	367.0	1204.07	217 44 00	1185.98
10—11	N. 71 16 W.	120 30	155.5	510.17	119 54 10	507.05
11—12	N. 86 03 W.	105 43	373.0	1223.75	105 21 45	1221.55
12—13	N. 61 06 W.	130 40	376.5	1235.23	129 59 20	1222.80
13—14	N. 78 24 W.	113 22	272.0	892.39	112 52 17	889.02
14—15	S. 52 03 W.	63 49	473.5	1553.47	63 16 43	1560.63
15—16	N. 28 56 W.	162 50	442.0	1450.13	162 26 32	1418.72
16—17	N. 35 20 E.	227 06	281.0	921.91	227 47 17	911.87
17—18	N. 38 43 E.	230 29	255.5	836.61	231 09 35	828.67
18—19	N. 23 17 E.	215 03	348.0	1141.73	215 42 10	1123.65
19—20	N. 7 19 E.	199 05	412.0	1351.70	199 30 52	1323.09
20—21	N. 14 30 W.	177 16	521.5	1710.95	177 12 02	1670.40
21—22	N. 23 34 W.	168 12	603.0	1978.34	167 55 20	1933.33
22—23	N. 56 04 E.	247 50	510.5	1674.86	248 18 43	1669.37
23—24	N. 42 40 E.	234 26	393.0	1289.37	235 05 04	1279.13
24—25	N. 3 07 E.	194 53	317.5	1041.66	195 13 47	1018.57
25—26	N. 16 22 W.	175 24	426.5	1399.28	175 17 20	1366.27
26—27	S. 70 12 W.	81 58	269.0	882.54	81 46 45	882.88
27—28	S. 50 30 W.	62 16	117.5	385.50	61 42 24	387.48
28—29	S. 39 30 W.	51 16	454.5	1491.14	50 36 25	1505.05
29—30	N. 61 56 W.	129 50	342.5	1123.68	129 10 00	1112.77

Station to Station	Magnetic Course	True Azimuth 11° 46′ Cor.	Distance Meters	Distance Feet	Adjusted. True Azimuth	Adjusted. Distance, Feet.
30—31	N. 22 04 W.	169 42	404.0	1325.46	169 27 20	1295.00
31—32	N. 6 55 E.	198 41	433.5	1422.24	199 06 22	1391.98
32—33	N. 42 04 E.	233 50	355.0	1164.70	234 29 20	1155.20
33—34	N. 37 51 E.	229 37	200.0	656.17	230 17 50	649.80
34—35	N. 13 45 E.	205 31	176.5	579.07	206 03 20	567.96
35—36	N. 1 34 E.	193 20	248.5	815.29	193 38 50	796.97
36—37	N. 22 58 W.	168 48	467.5	1533.79	168 32 06	1498.75
37—38	N. 64 09 W.	127 37	256.0	839.89	126 57 19	832.48
38—39	S. 74 37 W.	86 23	100.0	328.08	86 17 49	328.08
39—40	S. 44 17 W.	56 03	384.0	1259.84	55 25 20	1269.18
40—41	S. 88 26 W.	100 12	393.0	1289.37	99 57 49	1288.32
41—42	N. 58 01 W.	133 45	503.0	1650.26	133 03 52	1631.53
42—43	N. 63 59 W.	127 47	185.0	606.95	127 07 13	601.54
43—44	N. 65 48 W.	125 58	344.5	1130.25	125 19 00	1121.00
44—45	N. 29 12 W.	162 34	429.5	1409.12	162 10 14	1378.69
5—RXIII	N. 6 30 W.	185 16	658.0	2158.79	185 23 42	2107.95

The positions of RXII and RXIII as determined by triangulation being considered as correct, a computation of latitude and departures by the Salazar-Diaz courses and distances results in a closure of 951.16 feet too far north and 2.71 feet too far west. A proportionate correction for each latitude and departure gives azimuths and distances as under "Adjusted."

From Station 1 Near Frontera South to International Boundary on Parallel of 31° 47'.

Salazar-Diaz Survey 1852

Station to station	Magnetic course	True azimuth 11° 46' correction	Distance	
			Meters	Feet
1- 2	S. 83° 17' E.	288° 29' 00"	859.0	2,818.24
2- 3	N. 86 41 40" E.	278 27 40	172.5	565.94
3- 4	S. 66 45 10 E.	305 00 50	72.5	237.86
4- 5	S. 47 14 E.	324 32 00	283.0	928.48
5- 6	S. 45 15 40 E.	326 30 20	244.5	802.16
6- 7	S. 66 48 E.	304 58 00	241.0	790.68
7- 8	S. 71 40 50 E.	300 05 10	207.0	679.13
8- 9	S. 66 18 00 E.	305 28 00	479.5	1,573.16
9-10	S. 31 47 30 E.	339 58 30	814.0	2,670.60

The 3 trial courses following are not the courses as given in the Salazar-Diaz notes but were selected in accordance with the recommendation of the Special Master in Section V (1) of his report.

10-11		266° 10' 10"	.....	701.13
11-12		297 37 30	.....	904.29
12-13		329 05 05	.....	423.21

The next course corresponds to the Salazar-Diaz Course 7-a for Section RX to RIX and extends to the South Terminal Point in the Rio Grande of 1930 on the International Boundary.

13-14	S. 2° 36' 50" E.	9° 09' 10"	.....	2,084.16

Trial Line from Clark Monument No. 1 Southwest Down East Bank of Rio Grande of 1850-1860 to RXIII

According to Texas Surveys Nos. 161, 162, and 35

Station to station	True azimuth	Distance, feet
Clark No. 1 to Station 1	90° 00' 00"	600.00
1-2	6 34 50	1,880.00
2-3	42 17 20	1,961.30
3-4	80 32 00	2,538.30
4-5	49 58 38	2,091.20
Sta. 5 marked point on east bank opposite RXIII		
5-6	95 24 00	1,005.38

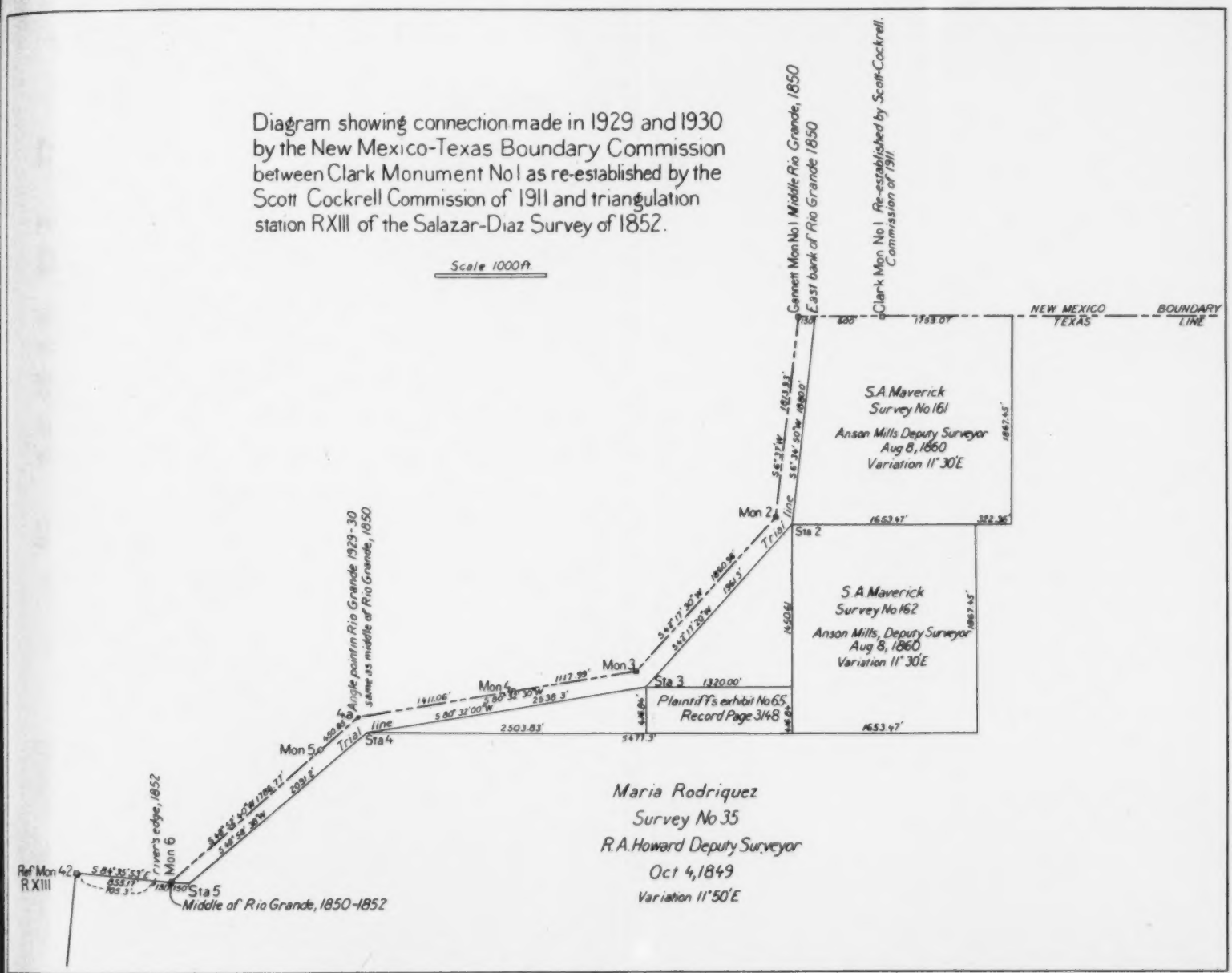


Diagram showing connection made in 1929 and 1930 by the New Mexico-Texas Boundary Commission between Clark Monument No 1 as re-established by the Scott Cockrell Commission of 1911 and triangulation station RXIII of the Salazar-Diaz Survey of 1852.
Scale 1000 ft
Gannett Mon No 1 Middle Rio Grande, 1850
East bank of Rio Grande 1850
Clark Mon No 1 Re-established by Scott-Cockrell Commission of 1911
NEW MEXICO
TEXAS
BOUNDARY LINE
S.A. Maverick
Survey No 161
Anson Mills Deputy Surveyor
Aug 8, 1860
Variation 11° 30' E
S.A. Maverick
Survey No 162
Anson Mills, Deputy Surveyor
Aug 8, 1860
Variation 11° 30' E
Mon 2
Sta 2
Trial line
Mon 3
Sta 3
1320.00'
Mon 4
Mon 5
Sta 4
Trial line
Angle point in Rio Grande 1929-30
Same as middle of Rio Grande, 1850
Plaintiff's exhibit No 65
Record Page 348
Maria Rodriquez
Survey No 35
R.A. Howard Deputy Surveyor
Oct 4, 1849
Variation 11° 50' E
Ref Mon 42
RXIII
Mon 6
river's edge, 1852
Sta 5
Middle of Rio Grande, 1850-1852

Magnetic Declination

Values of Magnetic Declination or Variation by Various Authorities

Locality	Date	Declination east, observed	Reduced to 1852	Authority
Frontera	1852	12° 24′	12° 24′	Maj. W. H. Emory.
Initial point at Latitude 31° 47′ on Rio Grande	1855	11 55	11 52	Maj. W. H. Emory. Master's Exhibit No. 1.
Paso (Juarez)	1852	11 14	11 14	Defendant's Exhibit No. 70.
Paso (Juarez Observatory)	1852	12 10	12 10	Augustin Diaz.
Frontera	1916	12 30	11 54	Engineers Post and Steen for plaintiff.
Frontera	1852	12 00	12 00	U. S. Coast and Geodetic Survey.
Frontera and area adjacent	1929	13 03	12 19	N. Mex-Texas Bdy. Line Commission.
Frontera	1859	12 25	12 19	John H. Clark.
Texas Surveys 161 to 171	1860	11 30	11 22	Anson Mills, Dep. Surveyor.
Texas Survey 35	1849	11 50	11 52	R. A. Howard, Dep. Surveyor.
Triangulation stations N-O	1916	.....	11 46	Defendant's Exhibit No. 70.

The weighted mean value adopted by the New Mexico-Texas Boundary Line Commission in 1929-1930 and applied to magnetic courses of the Salazar-Diaz traverse of 1852, to reduce them to true courses, is 11° 46′ E.

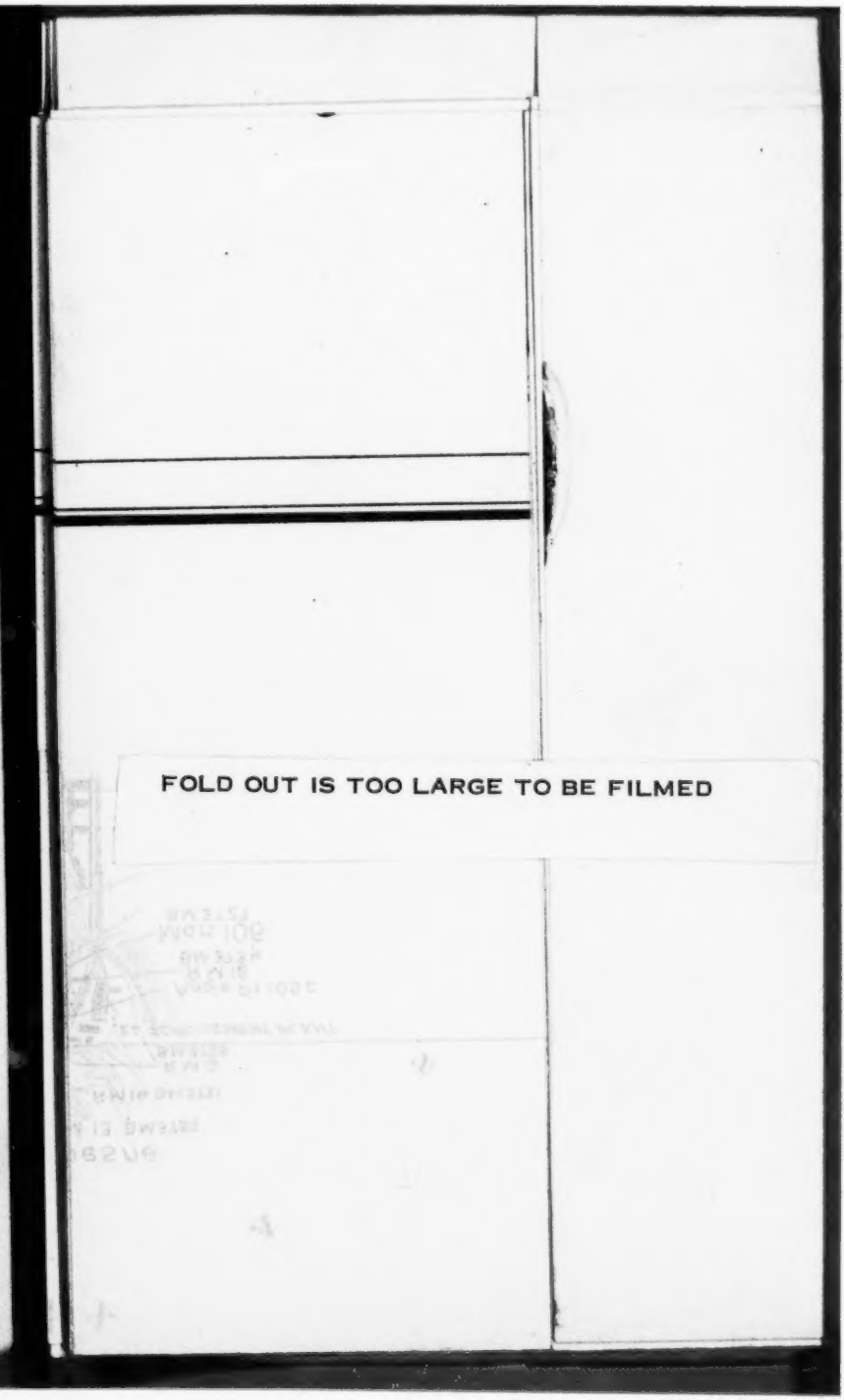
Description of Boundary Line by Courses and Distances

Monument or Angle Point.	Course referred to true N. or S.	Distance At sea level. Standard Temp. 68° F. Feet.	Distance At surface. Standard Temp. 68° F. Feet.
Clark No. 1 to Gannett No. 1	S. 90° 00′ W.	749.87	750.00
Gannett No. 1 to Mon. No. 2	S. 6 37 W.	1813.61	1813.93
Mon. No. 2 to Mon. No. 3	S. 42 17 30 W.	1860.66	1860.98
Mon. No. 3 to Mon. No. 4	S. 80 32 30 W.	1117.79	1117.99
Mon. No. 4 to Angle Point 4a in river of 1930	S. 80 32 30 W.	1410.81	1411.06
Angle Point 4a to Mon. 5	S. 48 53 00 W.	450.77	450.85
Mon. 5 to Mon. 6	S. 48 52 40 W.	1786.45	1786.77
Mon. 6 to RXIII	N. 84 35 53 W.	855.02	855.17
Mon. 6 to Mon. 7	S. 24 08 00 W.	2192.98	2193.37
Mon. 7 to Mon. 8	S. 17 50 00 E.	1296.67	1296.90
Mon. 8 to Mon. 9	S. 54 41 06 E.	1072.93	1073.12
Mon. 9 to Mon. 10	S. 52 50 02 E.	611.06	611.17

Monument or Angle Point.	Course referred to true N. or S.	Distance. At sea level. Standard Temp. 68° F.	Distance. At surface. Standard Temp. 68° F.
	° ′ ″	Feet.	Feet.
Mon. 10 to Mon. 11	S. 46 56 20 E.	1593.90	1594.19
Mon. 11 to Mon. 12	S. 80 09 33 E.	1181.04	1181.24
Mon. 12 to Mon. 13	N. 55 30 18 E.	1246.85	1247.07
Mon. 13 to Mon. 14	N. 86 17 12 E.	424.58	424.65
Mon. 14 to Mon. 15	S. 53 01 15 E.	944.85	945.02
Mon. 15 to Mon. 16	S. 11 27 15 E.	1588.60	1588.88
Mon. 16 to Mon. 17	S. 13 38 38 W.	846.45	846.60
Mon. 17 to Mon. 18	S. 26 02 15 W.	616.26	616.37
Mon. 18 to Mon. 19	S. 50 17 55 W.	687.30	687.42
Mon. 19 to Mon. 20	S. 54 29 05 W.	1112.89	1113.09
Mon. 20 to Mon. 21	S. 19 06 48 W.	1304.07	1304.30
Mon. 21 to Mon. 22	S. 10 28 03 E.	1199.99	1200.20
Mon. 22 to Mon. 23	S. 50 50 45 E.	934.81	934.97
Mon. 23 to Mon. 24	N. 50 35 15 E.	1396.43	1396.68
Mon. 24 to Mon. 25	N. 61 39 30 E.	428.20	428.27
Mon. 25 to Mon. 26	N. 81 45 15 E.	1068.00	1068.19
Mon. 26 to Mon. 27	S. 4 47 15 E.	1552.23	1552.50
Mon. 27 to Mon. 28	S. 15 23 40 W.	1099.47	1099.67
Mon. 28 to Mon. 30	S. 55 05 50 W.	1350.42	1350.66
Note: There is no Mon. 29.			
Mon. 30 to Mon. 31	S. 68 14 55 W.	1560.21	1560.49
Mon. 31 to Mon. 32	S. 12 08 35 E.	1818.50	1818.82
Mon. 32 to Mon. 33	S. 2 52 43 E.	1710.78	1711.08
Mon. 33 to Mon. 34	S. 19 28 24 W.	1374.99	1375.24
Mon. 34 to Mon. 35	S. 35 40 24 W.	1168.66	1168.87
Mon. 35 to Mon. 36	S. 51 07 38 W.	844.45	844.60
Mon. 36 to Mon. 37	S. 47 47 07 W.	811.83	811.98
Mon. 37 to Mon. 38	S. 17 35 15 E.	1145.86	1146.07
Mon. 38 to Mon. 39	N. 63 14 47 E.	1453.27	1453.52
Mon. 39 to Mon. 40	S. 67 09 57 E.	980.89	981.07
Mon. 40 to Mon. 41	S. 50 02 33 E.	1212.31	1212.53
Mon. 41 to Mon. 42	S. 74 38 15 E.	1207.59	1212.81
Mon. 42 to Mon. 43	S. 60 06 06 E.	698.02	698.15
Mon. 43 to Mon. 44	S. 37 44 20 W.	1445.08	1445.33
Mon. 44 to Mon. 45	N. 81 17 15 W.	989.69	989.87
Mon. 45 to Mon. 46	S. 45 34 55 W.	2337.17	2337.59
Mon. 46 to Mon. 47	S. 61 10 50 W.	1418.75	1419.01
Mon. 47 to Mon. 48	S. 71 45 20 W.	1763.34	1763.66
Mon. 48 to Mon. 49	S. 51 19 45 W.	1573.32	1573.60
Mon. 49 to Mon. 50	S. 51 42 00 W.	1170.95	1171.16
Mon. 50 to Mon. 51	S. 39 59 30 W.	1388.19	1388.44
Mon. 51 to Mon. 52	S. 29 07 40 W.	1543.98	1544.26
Mon. 52 to Mon. 53	S. 2 24 35 W.	1229.26	1229.48
Mon. 53 to RXII	S. 68 43 10 W.	163.76	163.78
Mon. 53 to Mon. 54	S. 44 58 04 E.	1229.76	1229.98
Mon. 54 to Mon. 55	S. 80 12 24 E.	506.77	506.86
Mon. 55 to Mon. 56	S. 73 28 07 E.	754.87	755.00
Mon. 56 to Mon. 57	S. 60 15 35 E.	944.35	944.52
Mon. 57 to Mon. 58	S. 50 20 27 E.	1137.80	1138.00
Mon. 58 to Mon. 59	S. 45 15 10 E.	1300.27	1300.50
Mon. 59 to Mon. 60	S. 23 45 30 E.	1055.47	1055.66

Monument or Angle Point.	Course referred to true N. or S.	Distance. At sea level. Standard Temp. 68° F.	Distance. At surface. Standard Temp. 68° F.
	° ′ ″	Feet.	Feet.
Mon. 60 to Mon. 61	S. 9 32 17 W.	808.40	808.54
Mon. 61 to Mon. 62	S. 23 45 10 W.	1212.63	1212.85
Mon. 62 to Mon. 63	S. 33 33 50 W.	1905.65	1905.99
Mon. 63 to Mon. 64	S. 13 40 15 W.	1603.15	1603.44
Mon. 64 to Mon. 65	S. 5 01 34 E.	1185.33	1185.54
Mon. 65 to Mon. 66	S. 49 18 23 E.	1414.03	1414.28
Mon. 66 to Mon. 67	S. 52 44 20 E.	111.44	111.46
Mon. 67 to Mon. 68	S. 55 57 30 E.	1416.92	1417.17
Mon. 68 to Mon. 69	S. 33 54 18 E.	437.12	437.19
Mon. 69 to Mon. 70	S. 23 42 02 E.	1688.62	1688.92
Mon. 70 to Mon. 71	S. 42 28 21 E.	1606.66	1606.95
Mon. 71 to Angle point 71a In drainage ditch of 1930.	S. 45 33 30 E.	415.25	415.32
Mon. 71 to Reference Mon. 33	S. 52 24 45 E.	419.30	419.37
Angle point 71a to Reference Mon. 33	N. 45 39 32 E.	50.00	50.01
Angle point 71a to Angle point 71b In dainage ditch of 1930.	S. 44 20 28 E.	1879.99	1880.32
Angle point 71b to Boundary Mon. 72	S. 40 44 38 E.	470.96	471.04
Angle point 71b to Reference Mon. 32	N. 45 39 32 E.	50.00	50.01
Reference Mon. 33 to Reference Mon. 32	S. 44 20 28 E.	1879.99	1880.32
Reference Mon. 32 to Boundary Mon. 72	S. 34 44 17 E.	476.70	476.79
Mon. 72 to Mon. 73	S. 51 09 36 E.	575.31	575.41
Mon. 72 to RXI-Ref. Mon. 44	S. 44 11 18 W.	150.57	150.60
Mon. 73 to Mon. 74	N. 87 32 20 E.	1660.90	1661.19
Mon. 74 to Mon. 75	S. 77 06 05 E.	1272.23	1272.45
Mon. 75 to Mon. 76	S. 61 08 45 E.	1109.58	1109.78
Mon. 76 to Mon. 77	S. 2 07 10 E.	1753.78	1754.10
Mon. 77 to Mon. 78	S. 28 33 10 W.	987.90	988.08
Mon. 78 to Mon. 79	S. 4 54 17 W.	1281.24	1281.46
Mon. 79 to Mon. 80	S. 16 15 38 W.	674.11	674.23
Mon. 80 to Mon. 81	S. 13 50 55 W.	1440.74	1441.00
Mon. 80 to Angle point 81a in river of 1930	S. 13 50 55 W.	1634.59	1634.88
Angle point 81a to Ref. Mon. 30	S. 13 50 55 W.	193.85	193.88
Angle point 81a to Angle point 81b in river of 1930	S. 36 44 10 E.	1389.68	1389.93
Angle point 81b to Ref. Mon. 29	S. 87 14 00 W.	180.90	180.93
Angle point 81b to Mon. 82	N. 87 14 00 E.	180.90	180.93
Angle point 81b to Mon. 83	N. 87 14 00 E.	2780.40	2780.90
Mon. 82 to Mon. 83	N. 87 14 00 E.	2599.50	2599.96
Mon. 83 to Mon. 84	S. 68 15 30 E.	886.40	886.56
Mon. 84 to Mon. 85	S. 56 56 15 E.	1271.90	1272.12
Mon. 85 to Mon. 86	S. 58 17 40 E.	388.72	388.79
Mon. 86 to Mon. 87	S. 25 20 17 E.	750.08	750.22
Mon. 87 to Mon. 88	S. 37 54 30 E.	1490.46	1490.73
Mon. 88 to Mon. 89	S. 32 04 55 E.	505.52	505.61

Monument or Angle Point.	Course referred to true N. or S.	Distance. At sea level. Standard Temp. 68° F.	Distance. At surface. Standard Temp. 68° F.
	° ′ ″	Feet.	Feet.
Mon. 89 to Mon. 90	S. 19 09 45 E.	500.84	500.93
Mon. 90 to Mon. 91	S. 46 00 10 E.	1816.27	1816.59
Mon. 91 to Mon. 92	S. 87 37 30 E.	1897.72	1898.06
Mon. 92 to Mon. 93	N. 48 39 25 E.	1470.02	1470.27
Mon. 93 to Mon. 94	N. 44 22 35 E.	241.23	241.27
Mon. 93 to RX-Ref. Mon. 45	S. 43 31 25 E.	150.12	150.14
Mon. 94 to Mon. 95	S. 74 49 40 E.	1159.80	1160.01
Mon. 95 to Mon. 96	S. 12 07 45 E.	506.49	506.58
Mon. 96 to Mon. 97	S. 79 36 56 E.	1430.19	1430.44
Mon. 97 to Frontera-Ref. Mon. 8	N. 18 37 34 E.	670.98	671.10
Mon. 97 to Mon. 98	S. 71 30 53 E.	2804.23	2804.73
Mon. 98 to Mon. 99	S. 81 31 22 E.	587.94	588.04
Mon. 99 to Mon. 100	S. 54 59 37 E.	298.94	298.99
Mon. 100 to Mon. 101	S. 35 27 38 E.	956.82	957.00
Mon. 100 to Ref. Mon. 9	N. 44 47 15 E.	39.99	40.00
Mon. 100 to Ref. Mon. 10	S. 44 47 15 W.	39.99	40.00
Mon. 101 to Mon. 102	S. 33 30 07 E.	776.01	776.15
Mon. 102 to Mon. 103	S. 54 57 52 E.	755.59	755.72
Mon. 103 to Ref. Mon. 23	S. 55 41 15 E.	679.19	679.31
Mon. 103 to Ref. Mon. 24	N. 9 34 08 E.	146.37	146.40
Mon. 103 to Ref. Mon. 11	S. 87 09 05 E.	783.62	783.76
Mon. 103 to Angle point 103a	S. 59 54 50 E.	679.72	679.84
In river of 1930.			
Angle point 103a to Angle point 103b	S. 54 32 00 E.	1626.34	1626.63
Angle point 103a to Ref. Mon. 11	N. 32 48 05 E,	359.01	359.07
Angle point 103a to Ref. Mon. 23	S. 32 48 05 W.	50.14	50.15
Angle point 103b to Mon. 104	S. 20 02 30 E.	1011.62	1011.80
Angle point 103b to Ref. Mon. 12	N. 52 42 16 E.	101.59	101.61
Angle point 103b to Ref. Mon. 22	S. 52 42 16 W.	333.69	333.75
Mon. 104 to Mon. 105	S. 20 02 30 E.	1043.29	1043.48
Mon. 104 to Ref. Mon. 12	N. 14 43 20 W.	1046.25	1046.43
Mon. 104 to Ref. Mon. 22	N. 39 17 25 W.	966.69	966.86
Mon. 105 to Angle point 105a	S. 20 02 30 E.	549.00	549.10
Mon. 105 to Ref. Mon. 13	S. 51 58 50 E.	440.70	440.77
Mon. 105 to Ref. Mon. 21	S. 11 30 44 E.	625.57	625.68
Angle point 105a to Angle point 105b	N. 86 15 12 E.	615.20	615.31
Angle point 105a to Ref. Mon. 13	N. 33 03 45 E.	291.52	291.57
Angle point 105a to Ref. Mon. 20	S. 82 34 46 E.	606.17	606.28
Angle point 105a to Ref. Mon. 21	S. 33 03 45 W.	116.00	116.02
Angle point 105b to Angle point 105c	S. 63 27 35 E.	1004.50	1004.68
Angle point 105b to Ref. Mon. 14	N. 6 09 50 E.	119.18	119.20
Angle point 105b to Ref. Mon. 20	S. 6 09 50 W.	119.18	119.20
Angle point 105b to Ref. Mon. 21	S. 78 31 50 W.	690.98	691.10
Angle point 105c to Mon. 106	S. 28 42 00 E.	519.88	519.98
Angle point 105c to Ref. Mon. 15	N. 43 19 00 E.	264.08	264.13
Angle point 105c to Ref. Mon. 19	S. 43 19 00 W.	150.00	150.02
Mon. 106 to 106a-South	S. 9 09 10 W.	2083.79	2084.16
Terminal point in river of 1930.			


FOLD OUT IS TOO LARGE TO BE FILMED

Monument or Angle Point.	Course referred to true N. or S.				Distance. At sea level. Standard Temp. 68° F.	Distance. At surface. Standard Temp. 68° F.
	°	′	″		Feet.	Feet.
Mon. 106 to Ref. Mon. 15.....	N. 6	01	50	W.	651.77	651.88
Mon. 106 to Ref. Mon. 16.....	N. 79	12	58	E.	163.39	163.41
Mon. 106 to Ref. Mon. 17.....	S. 4	58	30	W.	2065.05	2065.42
Mon. 106 to Ref. Mon. 18.....	S. 79	12	58	W.	176.17	176.20
Mon. 106 to Ref. Mon. 19.....	N. 45	27	45	W.	494.59	494.68
South Terminal Point 106a to International Boundary Mon. 1.....	S. 90	00	00	W.	483.30	483.39
So. Terminal Point 106a to Ref. Mon. 17	N. 90	00	00	E.	152.38	152.41

Total distance along the New Mexico-Texas Boundary Line from Gannett Monument No. 1 on the parallel of 32° north latitude, to the south terminal point on the paralled of 31° 47′ north latitude is 25.17 miles.

A statement of the time employed and the expense incurred in the performance of the work will be the subject of a later report. In compliance with the terms of the decree, 10 copies of the report with map have to-day been filed with the Clerk of the Court. One hundred and sixty additional copies of the report with map have been filed with the Clerk of the Court for the use of such interested parties as may apply for them.

Respectfully submitted,

Samuel S. Gannett, Commissioner.

Washington, D. C., July 17, 1930.

SUPREME COURT OF THE UNITED STATES

October Term, 1930.

No. 2, Original.

THE STATE OF NEW MEXICO, Complainant,

vs.

THE STATE OF TEXAS, Defendant.

Statement of the Work Done, the Time Employed and the Expenses Incurred by the Commissioner in the Running, Locating, and Marking upon the ground the Boundary between the State of New Mexico and the State of Texas, in the Valley of the Rio Grande River from the parallel of 32 degrees north latitude southwardly to the parallel of 31 degrees and 47 minutes.

WASHINGTON, *D. C., October* 3, 1930.

To the Chief Justice and the Associate Justices of the Supreme Court of the United States:

Complying with the instructions given in sec. 6 of the decree of April 9, 1928 (276 U. S. 557), your Commissioner begs to submit the following statement of the work done, the time employed and the expenses incurred in running, locating and marking upon the ground the boundary between the State of New Mexico and the State of Texas in the Valley of the Rio Grande River from the parallel of 32 degrees north latitude southwardly to the parallel of 31 degrees and 47 minutes.

New Mexico-Texas

Boundary Line Commission

Expenses paid by the Comptroller of Public Accounts of Texas on vouchers submitted in duplicate and approved by the Governor and by the Attorney General of the State of Texas.

1929				
March	1-11.	Samuel S. Gannett, pay	$275.00	
April	1-10.	Samuel S. Gannett, pay $250.00, Miscl. expenses $12.15		$537.15
Sept.	1-30.	Schoellhorn-Albrecht Machine Co., St. Louis, Mo., 100 bronze tablets		225.00
Sept.	1-30.	H. Welsch, El Paso, Texas, 50 metal forms		104.50
		Pay roll of field party		384.00
		Fred G. Gage, chainman, September 9-30, pay and per diem at $160.00 per month	$117.33	
		V. M. Jensen, chainman, September 11-30, pay and per diem at $125.00 per month	83.33	
		R. H. Reynolds, rodman, September 9-30, pay and per diem at $125.00 per month	91.67	
		Frank L. Vencill, rodman, September 9-30, pay and per diem at $125.00 per month	91.67	
			$384.00	
Sept.	1-30.	E. L. McNair, chief of party, pay $450.00, miscellaneous expenses $231.32		681.32
Sept.	1-30.	Samuel S. Gannett, Commissioner, pay $750.00, miscellaneous expenses $381.52		1,131.52

Oct.	1-31.	Pay roll of field party.....		410.00
		Fred G. Gage, chainman, pay and per diem, 1 month	$160.00	
		J. M. Jensen, chainman, pay and per diem, 1 month.....	125.00	
		Frank L. Vencill, rodman, pay and per diem, 1 month	125.00	
		E. L. McNair, pay $450.00, miscellaneous expenses $142.69.....		592.69
		Samuel S. Gannett, pay $775.00, miscellaneous expenses $325.21..		1,100.21
		Includes pay and per diem of R. H. Reynolds rodman October 1-12 inclusive at $125.00 per month, $48.39.		
Oct. Dec.	1- 31.	U. S. Geological Survey, Department of the Interior, Field surveys and compilation of topographic map of area adjacent to disputed boundary line.....		1,652.90
1929				
Dec.	1-31.	Payroll of field party.....		670.00
		Fred G. Gage, chainman, pay and per diem, 1 month at.....	$170.00	
		V. M. Jensen, chainman, pay and per diem, 1 month at	125.00	
		Frank L. Vencill, rodman, pay and per diem, 1 month at	125.00	
		Louis W. Ferguson, rodman, pay and per diem, 1 month at.....	125.00	
		Norman A. Ferguson, rodman, pay and per diem, 1 month at.....	125.00	
Dec.	1-31,	E. L. McNair, pay $450.00, Miscellaneous expenses $129.95.....		579.95

Dec.	1-31.	Samuel S. Gannett, pay $775.00, Miscellaneous expenses $371.05		1,146.05
1930				
Jan.	1-31.	Payroll of field party		617.58
		Fred G. Gage, chainman, pay and per diem, 1 month at	$170.00	
		V. M. Jensen, chainman, pay and per diem, 24-31 month at $125	96.77	
		Louis W. Ferguson, rodman, pay and per diem, 1 month at	125.00	
		Norman A. Ferguson, rodman, pay and per diem, 1 month at	125.00	
		J. H. Phaup, rodman, 25-31 month, at $125.00 per mo.	100.81	
Jan.	1-31.	E. L. McNair, pay $450, miscellaneous expenses $132.20		582.20
Jan.	1-31.	Samuel S. Gannett, pay $775.00, miscellaneous expenses $498.07		1,273.07
Feb.	1-27.	Samuel S. Gannett, miscellaneous and traveling expenses $966.38		788.38
		Credit one Chevrolet automobile truck sold at conclusion of field work	$175.00	
		Field material sold	3.00	
		Total credit	$178.00	
Feb. 1 to March	2.	E. L. McNair, miscellaneous and traveling expenses		220.46
Feb. 28 to March	31.	Samuel S. Gannett, miscellaneous and traveling expenses		33.00
March	1-31.	Samuel S. Gannett, pay		775.00
April	1-30.	U. S. Geological Survey, Repairs to field instruments $51.07, U. S. Geological Survey, Compilation of topographic map $236.13		287.20

April	1-30.	Samuel S. Gannett, pay $750.00, miscellaneous expenses $83.90	833.90
May	1-31.	E. L. McNair, pay	450.00
May	31.	U. S. Geological Survey, map compilation for April	290.84
May	12-31.	Samuel S. Gannett, pay $500.00, miscellaneous expenses $26.00	526.00
June	1-30.	U. S. Geological Survey, map compilation for May	81.39
June	1-30.	Samuel S. Gannett, pay $750.00, miscellaneous expenses $26.90	776.90
July	1-30.	U. S. Geological Survey map compilation for June	67.21
July	1-30.	U. S. Geological Survey photolithographing, and printing 250 copies of map for report of Boundary Commission	612.29
July	1-30.	Judd and Detwiler Inc., Washington, D. C., printing and binding 250 copies of report of Boundary Commission	401.85
July	1-30.	Samuel S. Gannett, pay $375.00 and miscel. expenses $11.00	386.00
Aug.	1-28.	Samuel S. Gannett, pay $100.00 and miscel. expenses $53.33, including U. S. Geological Survey map compilation for July $13.33, Judd and Detwiler Inc., printing this financial statement dated Oct. 3, 1930, $40.00	154.33
		Total amount paid by the State of Texas	$18,372.89

NEW MEXICO

Expenses paid by the Treasurer of the State of New Mexico on vouchers submitted in triplicate and approved by the Chairman, New Mexico Boundary Commission.

1929			
Aug.	31.	Pd. Oklahoma-Texas, 100th Meridian Boundary Line Commission for one used Chevrolet motor truck	$270.00

Aug.	1-31.	Samuel S. Gannett, pay $775.00, miscellaneous and traveling expenses $290.80		1,065.80
Nov.	1-30.	Field party pay roll		1,749.17
Nov.	1-30.	Samuel S. Gannett, Commissioner	$750.00	
Nov.	1-30.	E. L. McNair, Chief field party	450.00	
Nov.	1-30.	Fred G. Gage, Chainman, pay and per diem	170.00	
Nov.	1-30.	V. M. Jensen, chainman, pay and per diem	125.00	
Nov.	1-30.	Frank L. Vencill, rodman, pay and per diem	125.00	
Nov.	15-30.	Louis W. Ferguson, rodman, pay and per diem	66.67	
Nov.	16-30.	Norman Ferguson, rodman, pay and per diem	62.50	
Nov.	1-30.	Samuel S. Gannett, miscellaneous expenses		348.22
Nov.	1-30.	E. L. McNair, miscellaneous expenses		131.14
Nov.	30.	H. Welsch Co., El Paso, Texas, metal forms for monuments		105.00
Dec.	31.	Schoellhorn-Albrecht Machine Co., St. Louis, Mo., 55 bronze tablets		123.75
1930				
Feb.	1-28.	Samuel S. Gannett, pay		700.00
Feb.	1-28.	E. L. McNair, pay		450.00
Feb.	1-28.	Fred G. Gage, pay and per diem		190.00
March	1-31.	E. L. McNair, pay		450.00
April	1-30.	E. L. McNair, pay		450.00
May	1-11.	Samuel S. Gannett, pay		275.00
		Total amount paid by State of New Mexico		$6,308.08

Personal services of Samuel S. Gannett, Commissioner:

From March 1 to March 11, 1929	11 days	
From April 1 to April 10, 1929	10 days	
From August 1 to August 15, 1929	15 days	
		36 days

Studying the several thousand pages of the printed record and the several hundred exhibits of plaintiff and defendant, planning details of field work for the Boundary Commission.

From August 16, 1929, to February 28, 1930..... 197 days

Supervising field work of running, locating, and marking the disputed New Mexico-Texas Boundary Line in the Valley of the Rio Grande.

From March 1, 1930, to June 30, 1930..... 122 days

Making and directing final computations of field notes, supervising preparation of map and diagrams, arranging data, writing report of the New Mexico-Texas Boundary Line Commission.

355 days

Total 355 days at $25.00 per day..... $8,875.00

From July 1 to July 30, 1930..... 30 days
From Aug. 1 to Aug. 8, 1930..... 8 days

Total 38 days at $12.50 per day..... $475.00

Your Commissioner during the above specified 38 days besides supervising reproduction of maps, proof reading the report and compiling this financial statement of the Boundary Commission was also engaged on official duty as chief of the section of computing of the topographic branch of the United States Department of the Interior, Geological Survey, and received the pay of that station.

Total compensation actually received by your Commissioner, subject to the approval of the Court, from date of taking the oath of office August 14, 1928, to date of filing this expense account Oct. 3, 1930..... $9,350.00

Total cost of boundary work, described in report dated July 17, 1930, including compensation of Commissioner and cost of printing report of Commissioner and cost of printing this financial statement..... $24,680.97

Of the expenses listed above amounting to $24,680.97, the State of Texas has paid $18,372.89 and the State of New Mexico $6,308.08.

In order to equalize the costs, in accordance with terms of the decree of the Court as stated in paragraph 9 of the decree dated Apr. 9, 1928, there is due the State of Texas from the State of New Mexico (unless already paid) the sum of $6,032.41.

The method employed in the settlement of expense accounts including compensation of your Commissioner, at $25.00 per day, is similar to that used in the case of Oklahoma vs. Texas, the United States of America Intervener, No. 6 Original October term 1929, the financial statement of which case, dated October 21, 1929, was ratified, confirmed, and approved by the order of the Court Feb. 24, 1930.

Respectfully submitted,

SAMUEL S. GANNETT,
Commissioner.

WASHINGTON, D. C., *October* 3, 1930.

FILE COPY

JAN 10 1928
CHARLES ELMORE CROPLEY
CLERK

PROPOSED FORM OF DECREE

IN THE

Supreme Court of the United States

OCTOBER TERM, 1927

No. 2, Original—In Equity

THE STATE OF NEW MEXICO, Complainant,

vs.

THE STATE OF TEXAS, Defendant.

This cause having been heard and submitted upon the record and briefs of both parties hereto, and after full argument of counsel for both parties before the Master appointed herein and before the Court on the exceptions to the Master's findings, and the Court having considered the same and announced its conclusions in an opinion delivered December 5, 1927, it is, therefore, ordered, adjudged and decreed:

1. That the true boundary line between the State of New Mexico and the State of Texas at the places

in controversy in this cause, namely, between the parallel of 31° 47′ of North latitude and the parallel of 32° of North latitude on the international boundary between the United States and Mexico, is the middle of the main channel of the Rio Grande River as the same was located on the 9th day of September, 1850.

2. That the bill of the State of New Mexico, Complainant herein, be and the same is here dismissed; that the cross bill of the State of Texas, Defendant herein, be and the same is here sustained; that the exceptions to the Master's report filed by the State of New Mexico, Complainant herein, be and the same are here overruled; that the exceptions filed by the State of Texas, Defendant herein, be and the same are here sustained.

3. That and , are appointed and designated as Commissioners to accurately locate and mark said boundary line upon the ground, in accordance with this decree and the principles announced in the said opinion of this Court delivered on the 5th day of December, 1927.

4. That said Commissioners shall locate and mark the boundary line between the two States as determined by this decree in accordance with the principles announced by this Court in its opinion of December 5, 1927. In ascertaining and locating the line of said meridian the Commissioners shall use the most accurate method now known to science and applicable in that locality, and they shall mark the boundary as thus

ascertained by establishing permanent monuments thereon, suitably marked and at appropriate distances.

5. The Commissioners shall include in their report a description of the monuments so established and of their locations, and they shall file with their report the field notes of their survey, showing the method used by them in ascertaining and locating the line of the meridian, and a map showing the boundary line as run and marked by them. Also ten copies of their report and map.

6. Before entering upon the work the Commissioners shall take and subscribe their oath to perform their duty faithfully and impartially. They shall prosecute the work with diligence and dispatch and shall have authority to employ such assistants as may be needed therein and they shall include in their report a statement of the work done, the time employed and the expenses incurred.

7. The work of the Commissioners shall be subject in all of its parts to the approval of the Court. One copy each of the Commissioners' report and map shall be promptly transmitted by the clerk to the Governors of the two States, and exceptions or objections to the Commissioners' report, if there be such, shall be presented to the Court, or, if it be not in session, filed with the clerk, within forty days after the report is filed.

8. If, for any reason there occurs a vacancy in the Commission when the Court is not in session, the same may be filled by the designation of a new Commissioner by the Chief Justice.

9. All of the costs of executing this decree, including the compensation and expenses of the Commissioners, which shall be fixed by the Court, shall be borne in two equal parts by the two States involved.

Claude Pollard,
Attorney General of Texas.

FILE COPY

FILED
JAN 25 1928
CHARLES ELMORE CROPLEY
CLERK

MOTION TO ADOPT AMENDED FORM OF DECREE

IN THE

Supreme Court of the United States

JANUARY TERM, 1928

No. 2, Original—In Equity

THE STATE OF NEW MEXICO, Complainant,

vs.

THE STATE OF TEXAS, Defendant.

Comes now Claude Pollard, Attorney General of the State of Texas, and submits to the Court the following proposed form of decree, amending and changing the original form of decree heretofore submitted, and prays the Court to accept the present form of decree in lieu of the form of decree heretofore filed with the clerk on the 10th day of January, A. D., 1928.

Attorney General of Texas
for The State of Texas

PROPOSED AMENDED FORM OF DECREE

This cause having been heard and submitted upon the record and briefs of both parties hereto, and after full argument of counsel for both parties before the Master appointed herein and before the Court on the exceptions to the Master's findings, and the Court having considered the same and announced its conclusions in an opinion delivered December 5, 1927, it is, therefore, ordered, adjudged and decreed:

1. That the true boundary line between the State of New Mexico and the State of Texas at the places in controversy in this cause, namely, between the parallel of 31° 47′ of North latitude and the parallel of 32° of North latitude on the international boundary between the United States and Mexico, is the middle of the main channel of the Rio Grande River as the same was located on the 9th day of September, 1850.

2. That the bill of the State of New Mexico, Complainant herein, be and the same is here dismissed; that the cross bill of the State of Texas, Defendant herein, be and the same is here sustained; that the exceptions to the Master's report filed by the State of New Mexico, Complainant herein, be and the same are here overruled; that the exceptions filed by the State of Texas, Defendant herein, be and the same are here sustained.

3. That and , are appointed and designated as Commissioners to accurately locate and mark said boundary line upon the ground, in accordance with this decree and the principles announced in the said

opinion of this Court delivered on the 5th day of December, 1927.

4. That said Commissioners shall locate and mark the boundary line between the two States as determined by this decree in accordance with the principles announced by this Court in its opinion of December 5, 1927. In ascertaining and locating the line of said meridian the Commissioners shall use the most accurate method now known to science and applicable in that locality, and they shall mark the boundary as thus ascertained by establishing permanent monuments thereon, suitably marked and at appropriate distances.

5. The Commissioners shall include in their report a description of the monuments so established and of their locations, and they shall file with their report the field notes of their survey, showing the method used by them in ascertaining and locating the line of the meridian, and a map showing the boundary line as run and marked by them. Also ten copies of their report and map.

6. Before entering upon the work the Commissioners shall take and subscribe their oath to perform their duty faithfully and impartially. They shall prosecute the work with diligence and dispatch and shall have authority to employ such assistants as may be needed therein and they shall include in their report a statement of the work done, the time employed and the expenses incurred.

7. The work of the Commissioners shall be subject in all of its parts to the approval of the Court. One copy each of the Commissioners' report and map shall

be promptly transmitted by the clerk to the Governors of the two States, and exceptions or objections to the Commissioners' report, if there be such, shall be presented to the Court, or, if it be not in session, filed with the clerk, within forty days after the report is filed.

8. If, for any reason there occurs a vacancy in the Commission when the Court is not in session, the same may be filled by the designation of a new Commissioner by the Chief Justice.

9. That all costs occasioned by the taking and printing of additional testimony at the instance of intervenor, authorized by an order of this Court on April 14, 1924, including the compensation and expenses of the Commissioner taking said additional testimony, be borne by the State of New Mexico and L. M. Crawford; that all other costs, including the compensation and expenses of the Commissioner, which shall be fixed by the Court, shall be borne in two equal parts by the two States involved.